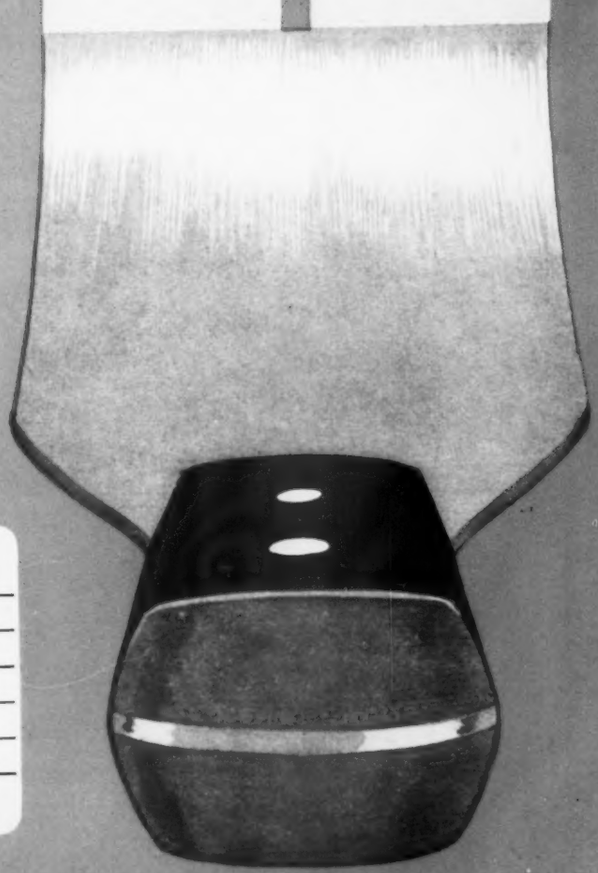
PRINTING EQUIPMENT *Engineer*

An Industry-wide Technical Publication



may 1953

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Production Mgr.	Bindery Foreman
Plant Supt.	Mailing Foreman
Platemaking Foreman	Maintenance Supt.
Composing Foreman	Purchasing Agt.

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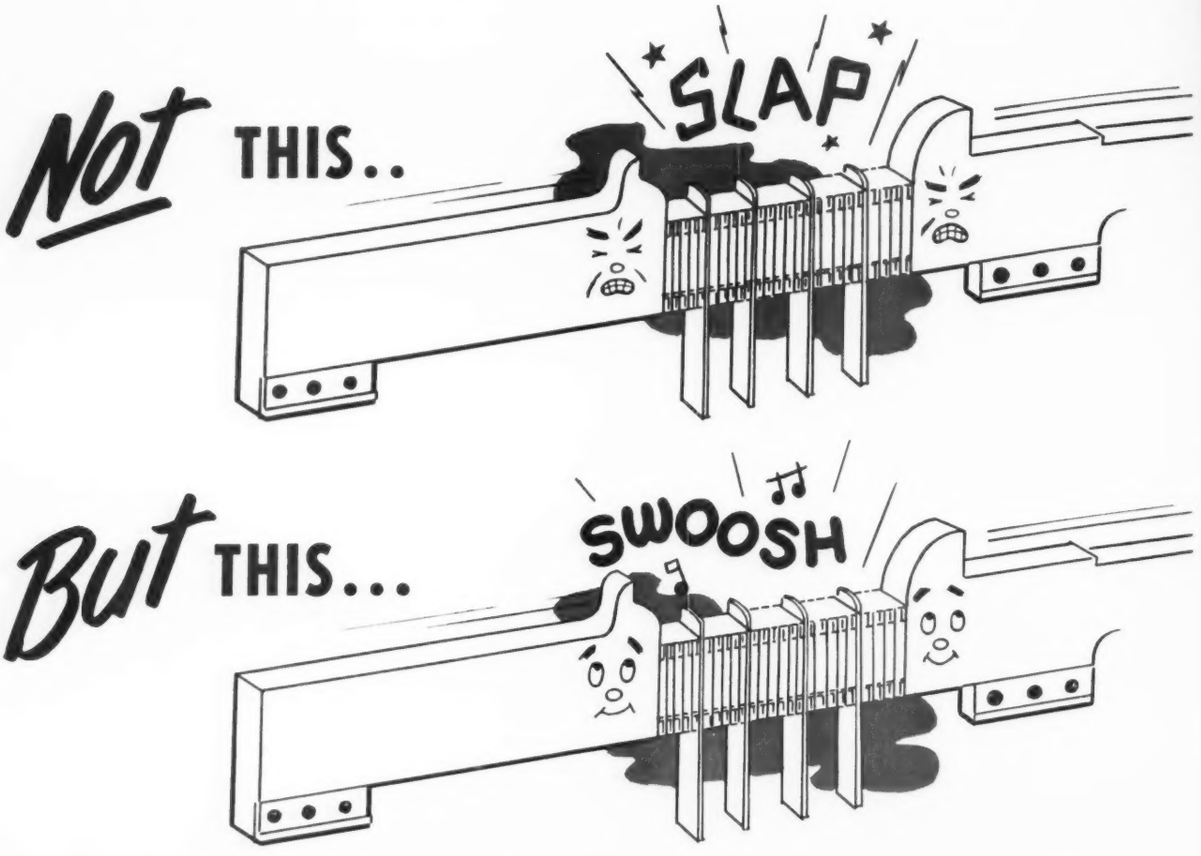

is the Vise Jaw Action you get with the Star HYDRAULIC Quadder

The "slap" which is characteristic of other quadders is absent here. The Vise Jaws of the STAR Quadder with hydraulic actuation close on the line of matrices gently and with consideration of their tender sidewalls.

Full details of this new model are given in a new folder.

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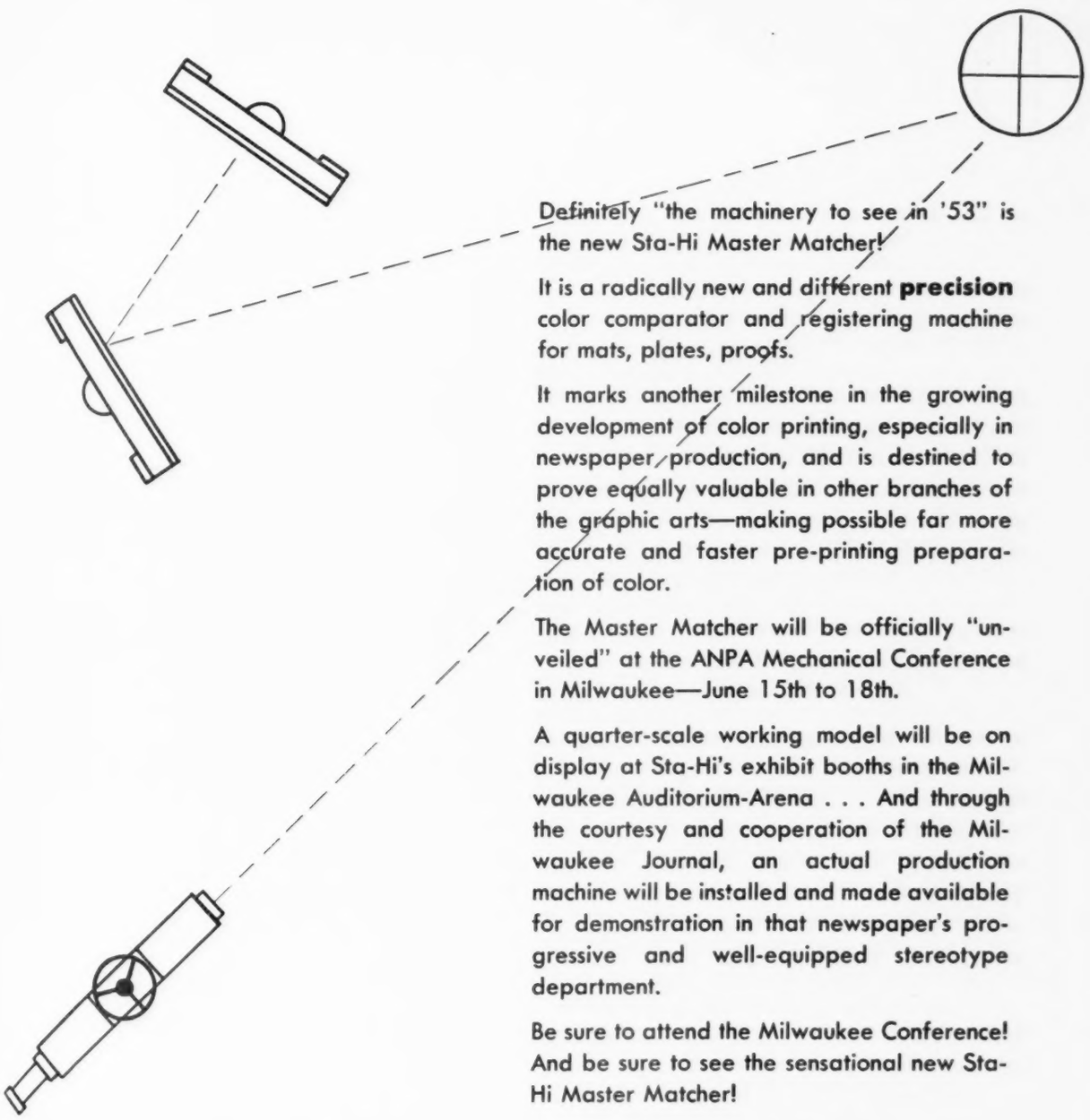
The big news in COLOR is coming from Sta-Hi!



Definitely "the machinery to see in '53" is the new Sta-Hi Master Matcher!

It is a radically new and different **precision** color comparator and registering machine for mats, plates, proofs.

It marks another milestone in the growing development of color printing, especially in newspaper production, and is destined to prove equally valuable in other branches of the graphic arts—making possible far more accurate and faster pre-printing preparation of color.

The Master Matcher will be officially "unveiled" at the ANPA Mechanical Conference in Milwaukee—June 15th to 18th.

A quarter-scale working model will be on display at Sta-Hi's exhibit booths in the Milwaukee Auditorium-Arena . . . And through the courtesy and cooperation of the Milwaukee Journal, an actual production machine will be installed and made available for demonstration in that newspaper's progressive and well-equipped stereotype department.

Be sure to attend the Milwaukee Conference! And be sure to see the sensational new Sta-Hi Master Matcher!

STA-HI CORPORATION
Box 152 • Whittier • California

1928 STA-HI 1953

OUR SILVER ANNIVERSARY OF SERVICE TO AMERICAN NEWSPAPER PUBLISHING

Equipment and Supplies

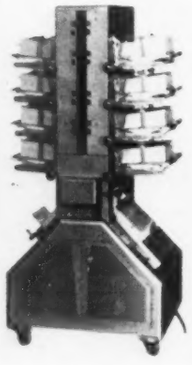
If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT Engineer, 1276 West Third St., Cleveland 13, Ohio.

Vertical Collating Machine

THE JCM Vertical Collator is an automatic upright gathering machine equipped with eight stations, announces J. Curry Mendes Corp. Sponsor states the machine makes possible the gathering of any job up to eight sheets. The machine is designed for gathering catalogs, booklets, bulletins, no-carbon forms, sales manuals, calendar pads and other types of work. Range of sheet sizes extend from 6 in by 7 in. up to 11 in. by 14 in. Each station will accommodate a 4 in. lift of paper. A variable speed device permits from 15,000 to 30,000 sheet pickups per hr. The machine will handle from 11 lb. to 100 lb. weights of paper.

A calipering device located at each station stops the machine automatically if a single sheet is missed or two sheets are picked up. The station affected is indicated by a flashing red light.

Proper feeding height of each paper pile is maintained automatically while sheets are lifted by suction cups and fed into rollers. These rollers, in conjunction with vertical belts, propel the sheets downwardly into a receiving tray. All eight sheets may be delivered to one tray, or four sheets may be delivered to one tray at one side of the machine and four sheets to the tray on the other side, making it possible to run two different jobs on the machine simultaneously.

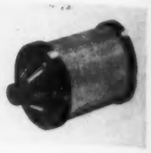


View of JCM Vertical Collator for gathering and collating automatically such things as catalogs, booklets, no-carbon forms, calendar pads and other types of work.

The portable machine is mounted on casters. Floor space is 26 in. by 34 in., height is 5 ft. 8 in. and it weighs 450 lbs. Sponsor states a four station model is being built. Further information may be obtained by mentioning PEE No. 616 in your request.

Printing Calculator

USE of the Remington Rand Printing Calculator designed for establishing selling prices and figuring job estimates for printers and publishers, is explained in a four page bulletin issued by Remington Rand Inc. Illustrations of job ticket and estimate sheets are shown along with printed tapes from the calculator showing how to compute costs and selling price. It is pointed out that the tape affords a permanent record for future reference, since every transaction is listed on it. A copy of the bulletin may be obtained by mentioning PEE no 605 when writing *Printing Equipment Engineer.*



Muffler Checks Noise from Vacuum Back Cameras—Allied Witan Co. has designed an air exhaust muffler specifically for checking noise and vapor mist on vacuum pumps and other vacuum operated equipment. Sponsor states muffler prevents work spoilage from oil and/or water vapor mists. Exhaust energy is dissipated in a radial flow pattern. The Automuffler may be taken apart; sound diffusing element is replaceable. Will operate in any position and is easily cleaned. Muffler available in pipe sizes from $\frac{1}{8}$ in. to 2 in. with o.d. at $1\frac{5}{8}$ in. to 5 in., and length from $3\frac{1}{2}$ in to 19 in. Further information will be furnished gladly if you will mention PEE No. 613 in your request.

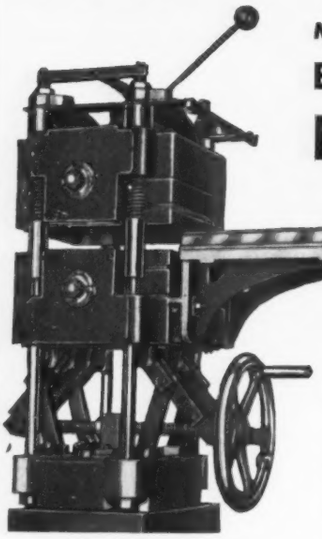
(*Continued on Page 6*)

CUT COSTS — PRINT WITH

RUBBER PLATES

MAKE THEM IN THE EASY-TO-OPERATE

EVA-PRESS



Materials Cost Less Than $1.25 For 10"x10" Plate

1. Insert type form and plastic sheet into hot Eva-Press, apply pressure, let cure for 10 minutes.

2. Release pressure, extract all from Eva-Press and have finished matrix.

3. Place (1) sheet of rubber on (2) matrix and insert both into hot Eva-Press, apply pressure, let vulcanize for 10 minutes.

4. Release pressure, extract all from Eva-Press and have finished Rubber Plate. More detailed directions supplied with Eva-Press.

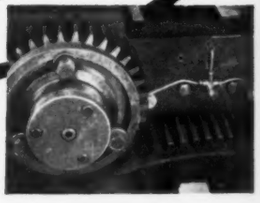
- PLATENS 11"x13"
- INSIDE CHASE 10"x12"

FOR MORE INFORMATION WRITE TO

AMERICAN EVATYPE CORPORATION

743 OSTERMAN AVE. DEERFIELD, ILLINOIS

"A Great Printing Press Achievement"



4 or more colors one time through the press at the rate of 10,000 sheets an hour or rewound rolls 600 feet per minute.

Hess & Barker's specially designed gears guarantee 100% hair line register at low or high speeds. Ink savings are guaranteed because of Hess & Barker's unsynchronized distributing system. Solid steel plate cylinders guarantee longer plate life. Quick, easy accessibility guarantees big make-ready savings. Hess & Barker's multi-color letterpress is a great achievement—a money maker. Write for additional information.

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Printing Press and Equipment Manufacturers

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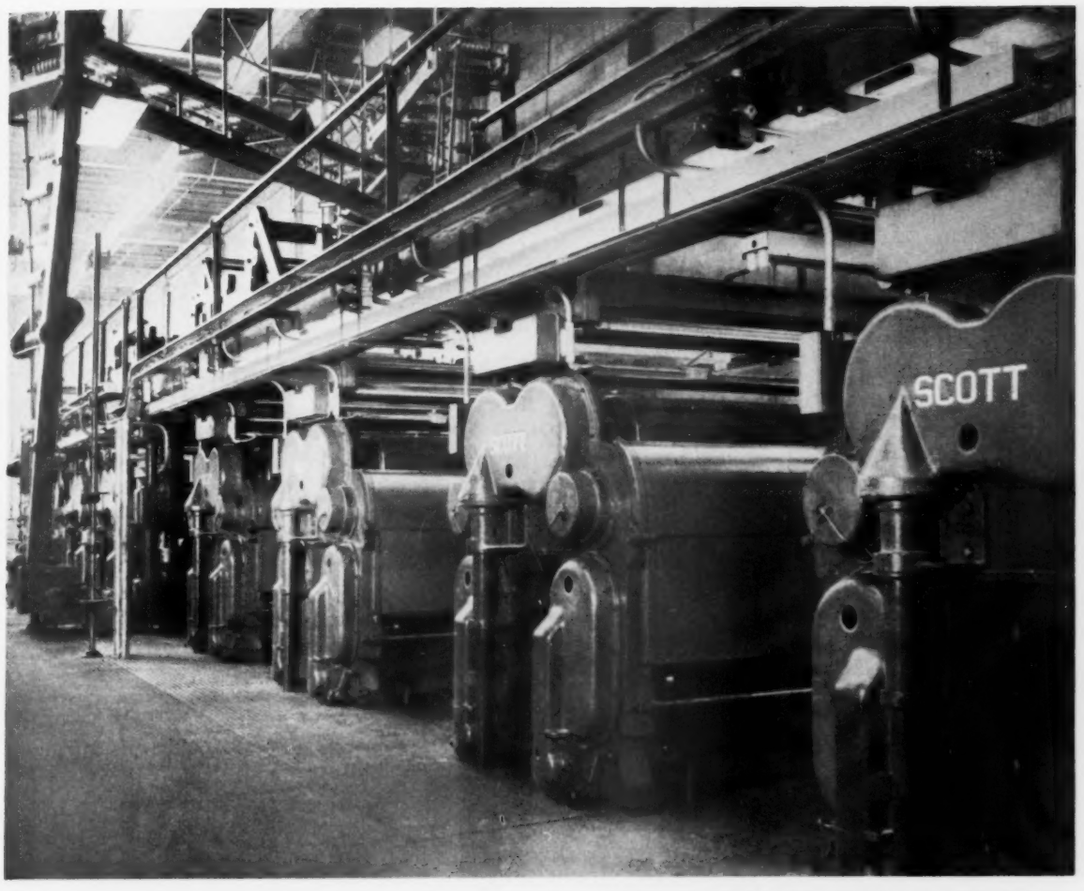
FOR THE LATEST AND MOST MODERN

in Press Design—See SCOTT



A Typical SCOTT Installation

EFFICIENT and ECONOMICAL OPERATION
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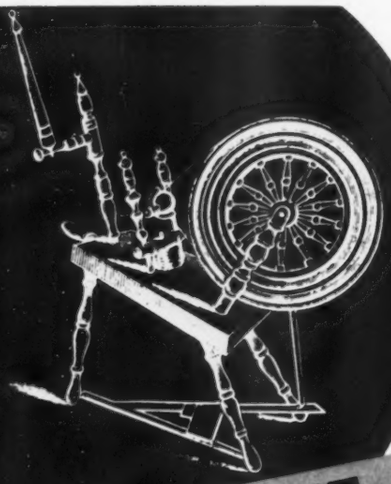
New SCOTT PRESS

Buy with Confidence . . . BUY SCOTT

WALTER SCOTT & CO., INC.

PLAINFIELD, N. J.



There's a Place for Antiques

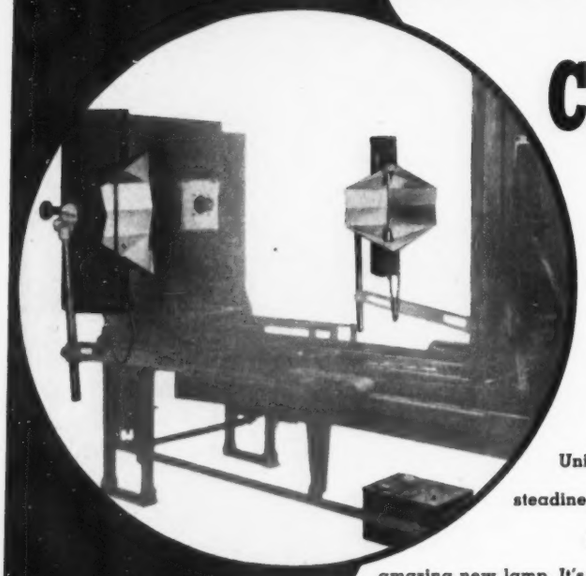
BUT IT'S NOT IN YOUR SHOP!

It's about time that you parted company with those old lamps, and availed yourself of the many advantages afforded by the new, low-cost

GRAFARC CHALLENGER

FULLY AUTOMATIC HIGH INTENSITY

CAMERA ARC LAMP



You'll be agreeably surprised how much money you can save — how much better work can be done — with this vertical trim lamp which burns at 75 amperes and 23 volts at the arc.

It's really automatic — the arc current controls the carbon feed so that the illumination and color temperature are constant. Here is true advancement in arc lamp design.

Uniform illumination is provided on work of any size, with extreme steadiness of light volume. The Strong Grafarc time-proven method of compensation for line voltage variations has been incorporated in this amazing new lamp. It's easy to see why such wide approval has been accorded the Challenger.

It is light in weight, and readily mounted on the lamp support arms of any camera. Adapters are available to fit all makes of cameras. The Challenger can also be used as a printing lamp.

Better abandon those old lamps of yours now. There are modern Strong Grafarc lamps designed for all photo-mechanical processes — printing lamps, camera lamps, photo-composing lamps, and overhead printing lamps.

USE COUPON NOW TO OBTAIN COMPLETE LITERATURE.

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MAY 1953

PRINTING EQUIPMENT *Engineer*

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

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EDITORIAL STAFF

MacD. SINCLAIR, Editor

ADAM HENRY REISER
Associate Editor

EDWARD H. OWEN
Assistant Editor

BUSINESS STAFF

DON WILL, Publisher

William L. Osborn, Eastern Manager, 1712 Grand Central Terminal, New York 17, N. Y. Phone: MUrray Hill 6-5980.

Melburn O. Simmons, Mid-West Manager, 333 North Michigan Ave., Chicago 11, Ill. Phone: DEarborn 2-6467

George Gell, Central District Manager, 1276 W. Third St., Cleveland 13, Ohio. Phone: CHerry 1-6645.

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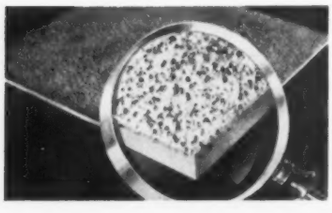
Printed in U. S. A.

AN INDUSTRY-WIDE TECHNICAL PUBLICATION

Ink mist creates a slipping hazard on *any* conventional pressroom floor. So, when the St. Petersburg (Fla.) Times recently doubled the size of its pressroom, it replaced old-fashioned, unsatisfactory flooring with non-skid ALGRIP Abrasive Rolled Steel Floor Plate. "Completely satisfactory," the Times reports.

Besides non-slip foot safety, one of the best things about ALGRIP is its ability to pay for itself in lowered insurance rates. Compensation premiums, geared to accident rates, are bound to shrink when slipping accidents decrease. And that's inevitable when you install ALGRIP. Reason: ALGRIP's unique construction—with tough, abrasive "grinding-wheel" grain rolled uniformly into steel plate's upper portion. It's virtually impossible to slip on ALGRIP; *hundreds of tiny safety brakes in every footstep* make it anti-skid—even on steep inclines!

Get your *savings from safety*—starting now. Send for our new Booklet AL-33 on long-wearing, breakage-and-fire-resistant ALGRIP. Ask any questions you wish; we'll be glad to answer them.



RECENT INSTALLATIONS—Here are a few recent installations: Plain Dealer, Cleveland, Ohio • Seattle Times, Seattle, Washington • Beaumont Enterprise and Journal, Beaumont, Texas • Washington Times Herald, Washington, D.C. Also many others, names furnished upon request.

◀ Magnification shows even distribution of abrasive grain.

THERE'S NEVER A SLIP ON A. W. ALGRIP

Over 125 Years of Iron and Steel Making Experience

ALAN WOOD STEEL CO. ESTABLISHED A.W. 1826 CONSHOHOCKEN, PA.

ALAN WOOD STEEL COMPANY

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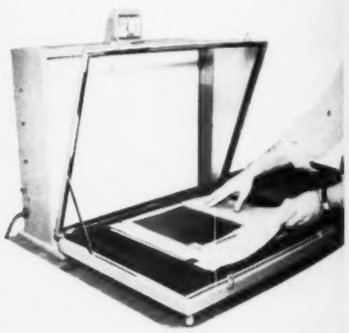
OTHER PRODUCTS: A. W. SUPER-DIAMOND Floor Plate • Plates • Sheets • Strip (Alloy and Special Grades)

Equipment & Supplies

(Continued from Page 2)

Vacuum Exposure Frame

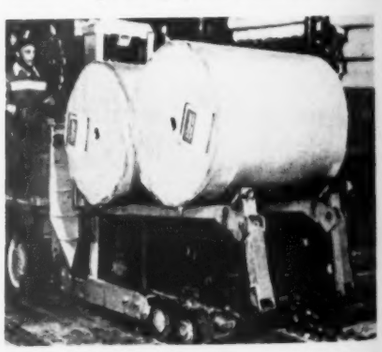
COLWELL LITHO PRODUCTS, INC. has announced another model of the Colight Exposure Frame equipped with a vacuum mat and pump. Known as Model BV-1016, it is designed for making



offset plates in the 10 in. by 16 in. size. Intended primarily for processing presensitized offset plates, it can also be used as auxiliary equipment for handling albumen plates, silverprints, blueprints and mechanical negatives for typed or stylused work. The self-contained unit features a latticed directional glass which is claimed to prevent admission of cross-rays of light and thus eliminate undercutting or dot spread in halftone work. Colwell states three other sizes of the Colight frame are available for accommodating up to a 17 in. by 22 in. plate. For additional information please request PEE No. 624 in your inquiry.

Attachment Speeds Paper Roll Handling

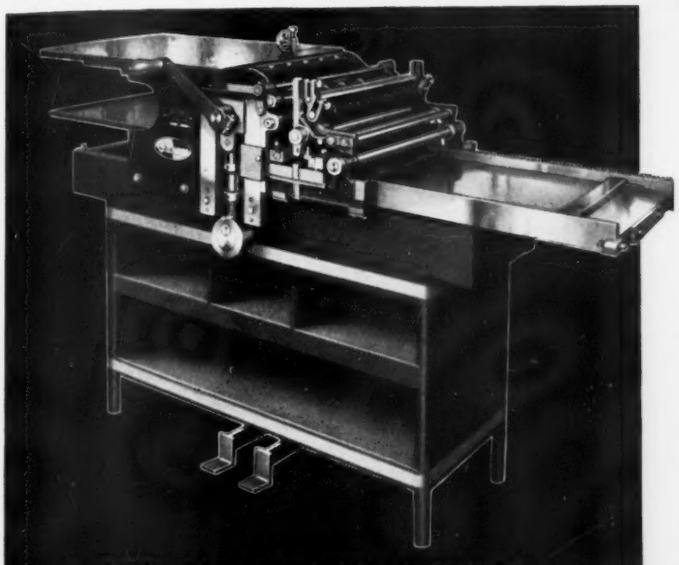
A SPECIAL purpose Elwell-Parker platform truck equipped with fork arms is in operation at the W. F. Hall Printing Co., Chicago. It is used for transporting paper rolls from warehouse to printing press scattered over a



wide area. Two rolls can be carried simultaneously. Approximately 40 rolls per hr. can be handled. Truck arms are hinged at the ends; rollers at the tips of the arms are designed to roll along the floor in a lowered position. This facilitates loading of rolls and their discharge. Small hinged sections at the hinge joint

(Continued on Page 14)

if it's PROOF you're after . .



DESIGN AND OPERATING FEATURES

- Two sizes to handle anything up to 14½ x 23½", or 19½ x 23½".
- Cylinder grippers and micrometer side guide to control feeding and positioning of sheet.
- Foot trip prevents offset on cylinder packing during return stroke.
- Grippers may be opened at any position of cylinder.
- All models equipped with feed board, delivery board and zinc galley plate.

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you'll get sharp accurate impressions with Challenge® series K PROOF PRESSES

Take a close look at a Challenge and you'll see why its "cylinder press" operation offers so many advantages. This proven principle of the reciprocating bed riding on anti-friction rollers assures sharp, accurate impressions on proofing jobs of every kind, including register proofs. There is a series of Challenge Proof Presses to meet your shop requirements. Send for free catalog showing the complete Challenge line.

THE CHALLENGE MACHINERY COMPANY
Office, Factories and Show Room:
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Over 50 Years in Service of the Graphic Arts
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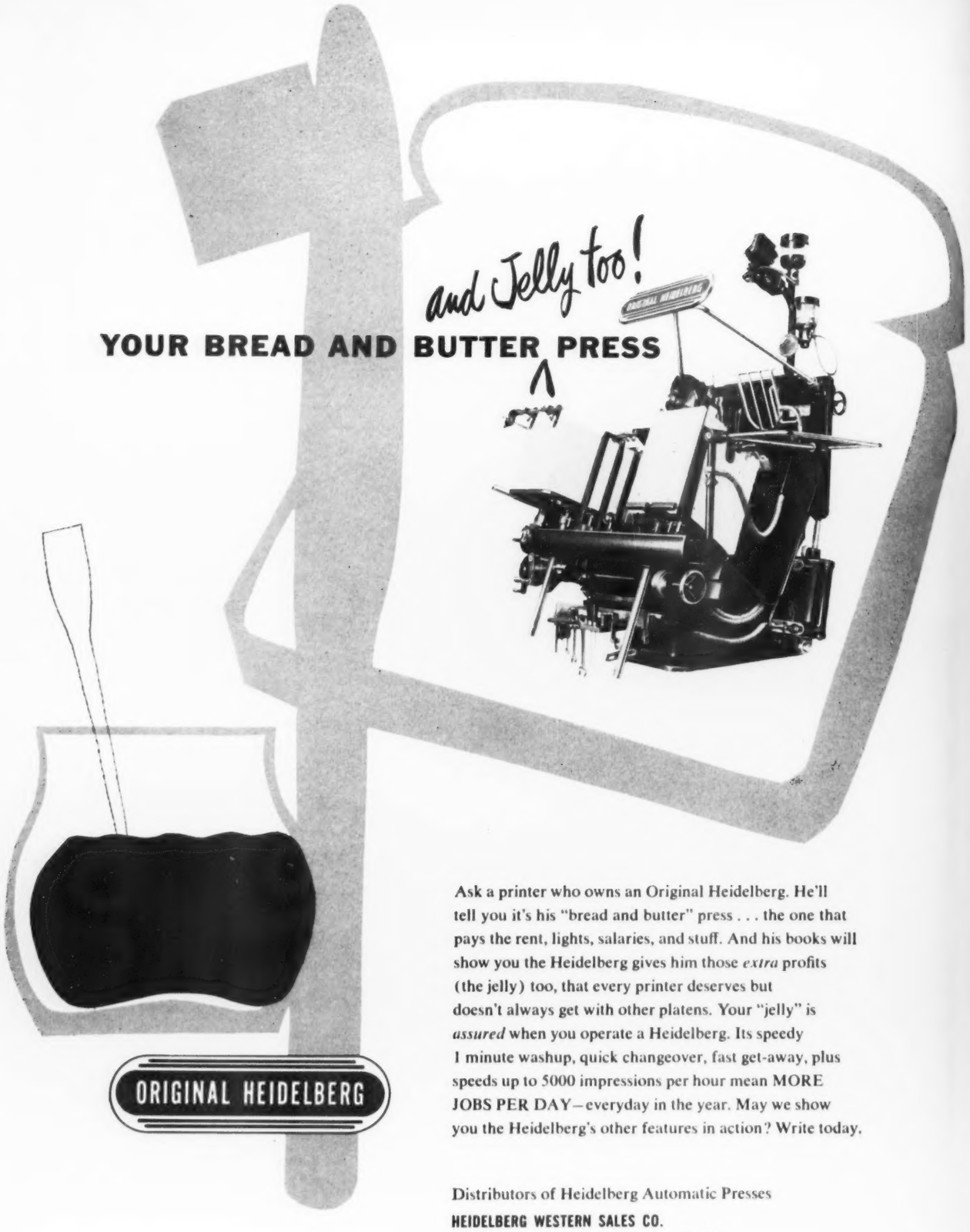

and Jelly too!

YOUR BREAD AND BUTTER PRESS

ORIGINAL HEIDELBERG

Ask a printer who owns an Original Heidelberg. He'll tell you it's his "bread and butter" press . . . the one that pays the rent, lights, salaries, and stuff. And his books will show you the Heidelberg gives him those *extra* profits (the jelly) too, that every printer deserves but doesn't always get with other platens. Your "jelly" is *assured* when you operate a Heidelberg. Its speedy 1 minute washup, quick changeover, fast get-away, plus speeds up to 5000 impressions per hour mean MORE JOBS PER DAY—everyday in the year. May we show you the Heidelberg's other features in action? Write today.

Distributors of Heidelberg Automatic Presses

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120 N. Sampson St., Houston 3, Texas

Does 5-color printing at 2-color speed

...with all 15 cylinders on TIMKEN® bearings

THIS big Miehle 61 Offset Press, installed in the Los Angeles plant of Pacific Press, Inc., handles a 42 x 58 sheet in five colors at speeds up to 6,000 an hour.

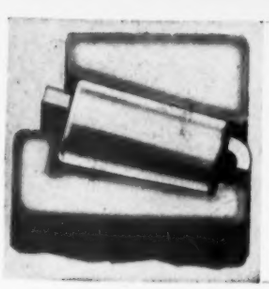
At any speed, this unit holds register right on the dot. This it can do because all impression, blanket and plate rolls turn on Timken® bearings. Since the rollers are tapered, the bearings are adjusted at final assembly to eliminate any sign of end play or looseness in the bearing. This tapered roller design becomes particularly important when we look ahead a few years. Because of it, a simple pressure adjustment on the Timken bearings automatically compensates for wear, *without affecting the precise alignment of the rolls.*

On long fast runs, these Timken bearings make very substantial savings on press time. Their frictionless rolling motion keeps them from over-heating, so the press can roll at top speed for days on end.

You'll enjoy these same advantages on all your printing equipment if you'll just specify Timken bearings. Look for the trade-mark "Timken" on every bearing. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

This symbol on a product means its bearings are the best.

MIEHLE PRINTING PRESS AND MANUFACTURING COMPANY mounts plate, blanket and impression cylinders of this 5-color offset press on Timken bearings to maintain close register at high speeds.



HARD ON THE OUTSIDE, TOUGH ON THE INSIDE

Rollers and races of Timken bearings are case-carburized to give a hard, wear-resisting surface and a tough, shock-resisting core. Result: longer bearing life.

The Timken Company leads in: 1. advanced design; 2. precision manufacture; 3. rigid quality control; 4. special analysis Timken steels.

TIMKEN

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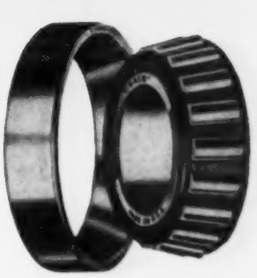
TAPERED ROLLER BEARINGS

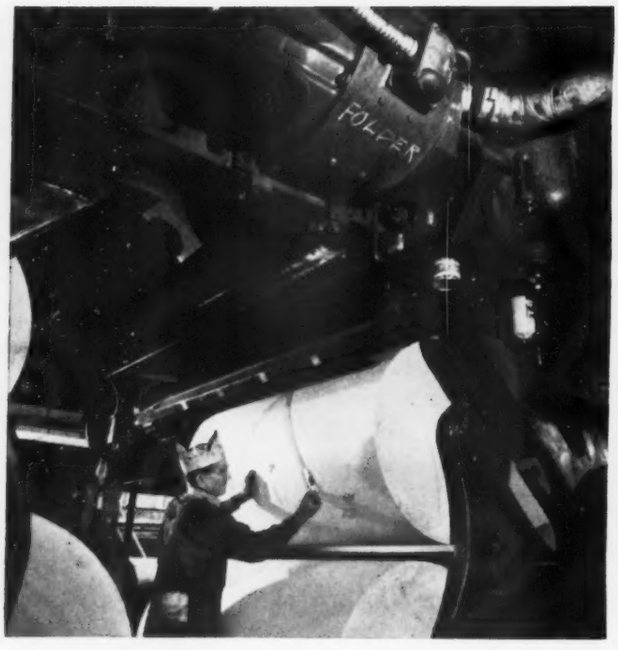


NOT JUST A BALL ○ NOT JUST A ROLLER ⬭ THE TIMKEN TAPERED ROLLER ⬭ BEARING TAKES RADIAL AND THRUST → LOADS OR ANY COMBINATION

ENGINEERING REPORTS:

DEPENDABLE POWER provided by G-E electronic press drive on Goss Headliner permits Oklahoma Publishing Company to run editions of *Oklahoma City Times* and *The Daily Oklahoman* at average of 60,000-pph, when required in daily production.

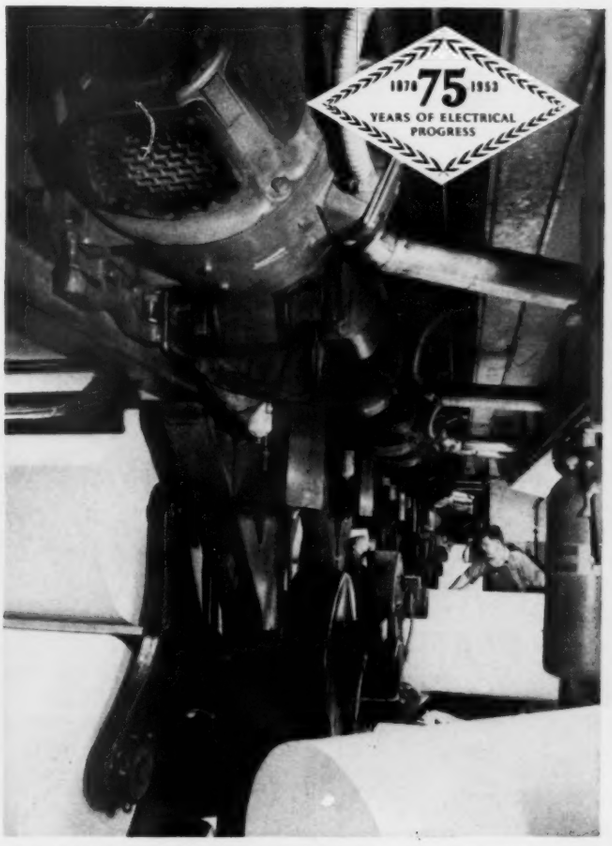
Oklahoma City Times runs 81,000



FULL SPEED PASTES are no problem—even at 60,000 pph—because Wood Automatic Autopasters powered by G-E Thy-motrol* Drives provide positive splices regardless of press speeds.
*Reg. General Electric Trademark.

PRODUCTION CONTINUITY is aided by dependable control; G-E drive eliminates threading motors, gears, clutches, and mechanical brakes, greatly reducing mechanical maintenance.

RUGGED, LONG-LIFE G-E power and control equipment is housed in these compact cubicles for easy accessibility; simplified control has long-life tubes, contains no power contactors.



INDIVIDUAL G-E DRIVE MOTORS for each unit are press-mounted. Rated at 50 hp, they provide plenty of smooth, dependable power for high-speed newspaper production.

84-page final edition in 1½ hours

G-E electronic drive powers new Goss Headliner press to meet 60,000-pph pace for all editions at Oklahoma Publishing Company

Mr. L. S. Vance, Business and Production Manager of the Oklahoma Publishing Co., publishers of *The Daily Oklahoman* and *Oklahoma City Times,* says of their new G-E electronic press drive: "The ease of installation and start-up met all our specifications. We started up on time because all the equipment arrived on the promised delivery dates.

"Recently, we were running a few minutes late and needed 57,000 papers during the next hour. We ended up with a ***net*** production of 57,000 in 56 minutes —and we hit the street on time. The presses actually exceed 60,000-pph many times during daily production." The Oklahoma Publishing Company editions now start later and finish earlier using one press with G-E electronic press drive than they did previously using two presses.

Dependable power, smooth acceleration and braking, as well as dependable service, are only a few of the many advantages of low-maintenance G-E electronic press drive. For complete information contact your nearest General Electric Apparatus Sales Office or write for Bulletin GEA-5523 . . . today!
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●"We purchased our first Lake Erie press in 1946," says Mr. H. H. Farrington, President of The Cresset Company of New York City. "It was so efficient and dependable that we have since purchased 10 more presses from Lake Erie. We now have 6 ACRAPLATES and 5 DIRECTOMATS in our plant. These 11 molding presses have proved conclusively that they have everything it takes to produce the highest quality products at the lowest possible cost."

HOW CRESSET CRAFTSMEN MOLD PLASTIC PLATES

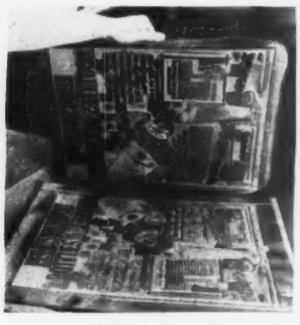
1. The Cresset molder lays a sheet of *thermosetting* plastic material over the pattern plate.

2. It is then rolled into a Lake Erie ACRAPLATE where precise heat and pressure are applied.

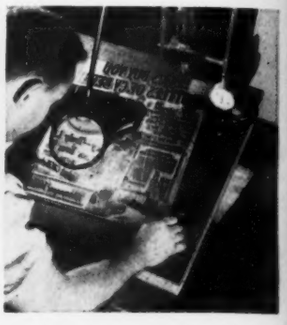
3. The female mold of permanently set plastic material is removed from the Lake Erie press.

4. The mold is covered with granular *thermoplastic* plate material which is heated until soft.

5. The plate is then placed in a Lake Erie ACRAPLATE press and molded.



6. The plastic plate is removed. Thickness will be checked with a micrometer.

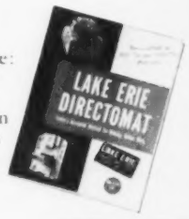


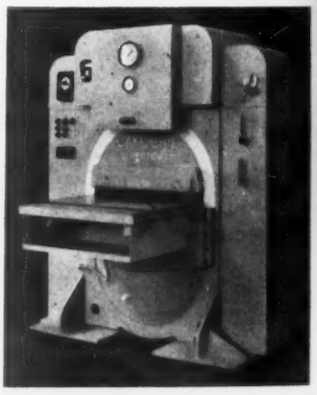
7. The plate is trimmed and carefully inspected prior to shipment by The Cresset Company.

● **ACRAPLATE**—The favorite rubber and plastic plate molding press. Five models available with capacities from 115 to 550 tons and platen sizes from 17"x22" to 36"x44".

● **DIRECTOMAT**—The outstanding direct pressure mat molding press. Two models available with capacities of 800 and 1000 tons, and platen sizes of 32½"x24" and 34"x26".

● Write for descriptive literature: Bulletin No. 350 describes the ACRAPLATE. Bulletin No. 349 describes the DIRECTOMAT.





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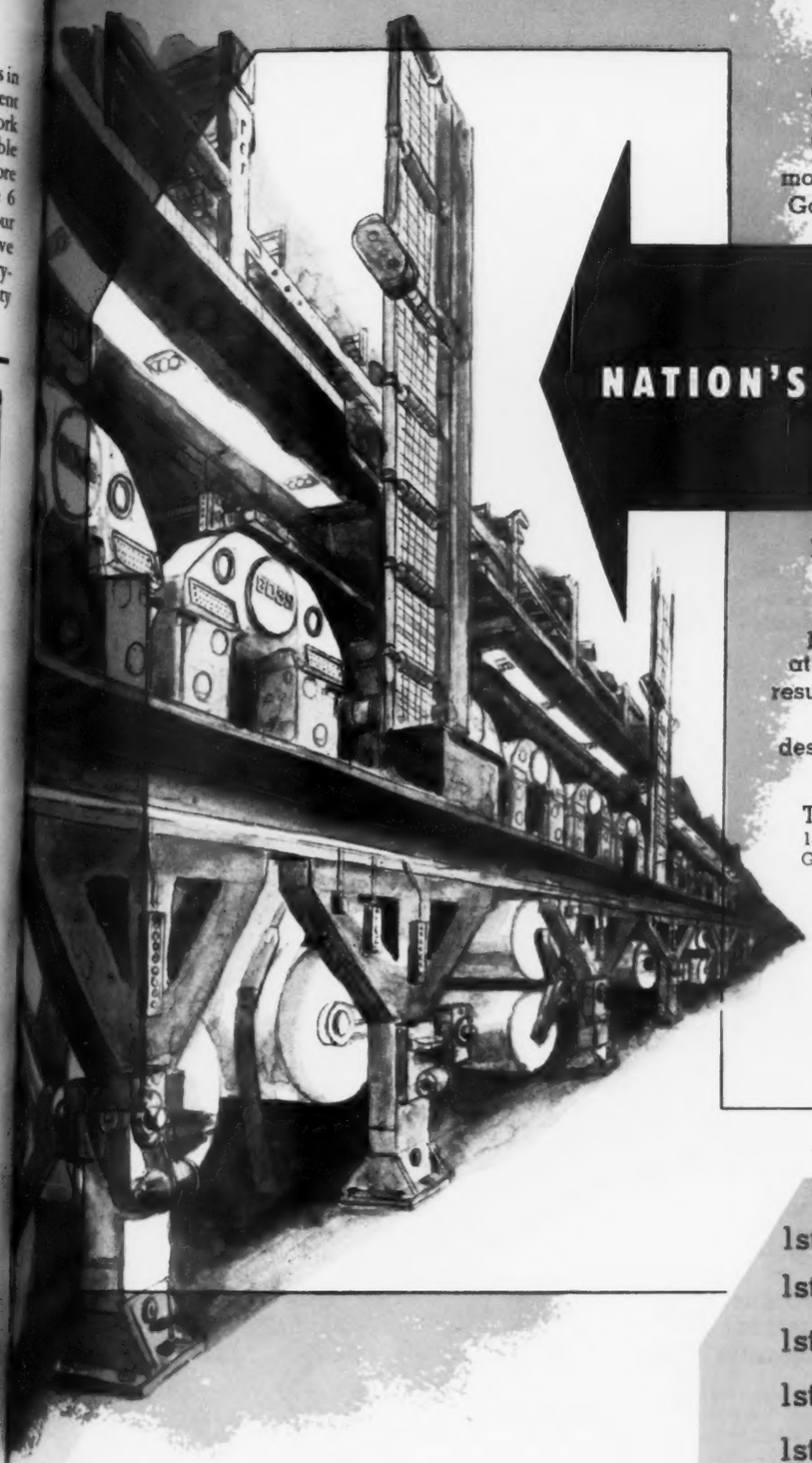

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Equipment & Supplies

(Continued from Page 6)

rise when a load is lifted to provide a positive stop, preventing the paper from rolling off, even during sudden stops. The truck, in addition to transporting the heavy rolls, is also used as a positioning device at the press. The truck works in conjunction with overhead handling equipment in depositing the rolls at the feeding end of the press. Further information about this truck may be had by mentioning PEE No. 615 in your request.

Day-Glo Letterpress Inks

A DAY-GLO ink for letterpress made its debut on April 24 with the appearance of *Popular Science Monthly*. To demonstrate its practical printing qualities for high speed color presses, the new daylight fluorescent ink is being first used in a press run of more than a million copies.

The flaming brilliance of an atomic bomb explosion, pictured on the *Popular Science* cover, is brought to life with the extra brightness of the Day-Glo ink. The five-color illustration was printed with four regular type inks in combination with the new ink which exhibits the characteristic glow of the daylight fluorescent colors. This new ink was developed by Interchemical Corporation, licensee of Switzer Brothers, Inc.

Popular Science is produced in the McCall Corporation's huge printing plant in Dayton, O. Working on this test of the new inks with the staff of McCall Corporation and *Popular Science* were Milton Zucker, Technical Assistant to the President of Interchemical Corporation, and Joseph L. Switzer, Vice President in charge of research of Switzer Brothers.

IPI now offers letterpress Day-Glo colors in a limited range for Vaporin (heat-set), Vaposet (moisture-set), and regular oil inks. Also being introduced in the IPI line is a Day-Glo Aniline ink for flexographic presses. These new inks, it is stated, have definite characteristics and limitations which must be considered before use by the printer. The most important of these is a limited lightfastness. Their lightfastness on the average is comparable to fugitive Peacock Blue pigment. They cannot be used where permanency is required or where the job would be exposed to sunlight for any long period—such as outdoors or in window displays. Shelf stability is about equal to that of regular inks.

(Continued on Page 17)

Adjustment of plates for register on cover of May issue of *Popular Science* magazine in McCall Corporation's plant, Dayton, O. Interest shown in faces of these men at the racked-back press is caused by first time run of IPI Day-Glo letterpress ink. Left to right in back row are Howard Jensen, Art Director, *Popular Science Monthly;* Joseph Sauer, McCall's Contract Publications Manager, and Joseph Switzer, Vice President, Switzer Brothers, Inc. Seated at left is Tom Taylor, McCall's Pressroom Supt., and two pressmen making plate adjustments.

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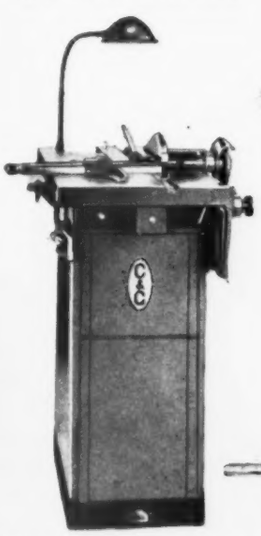
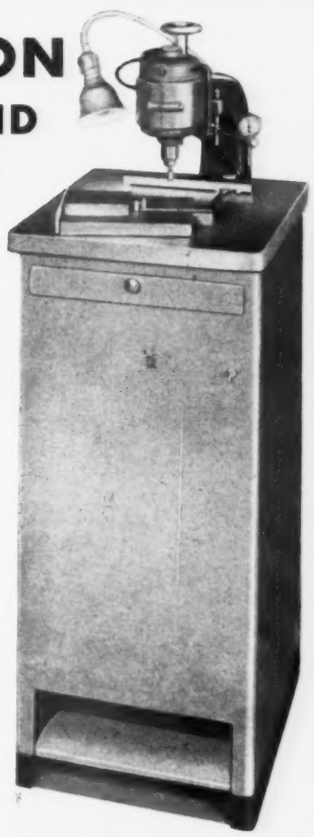
MORRISON MODEL 3-A SAW TRIMMER



Today's more versatile saw. Clamps the work **behind gauge** for improved visibility, easier handling, and greater accuracy. A must for economy-minded composing rooms.

MORRISON ROUTER AND TYPE-HIGH PLANER



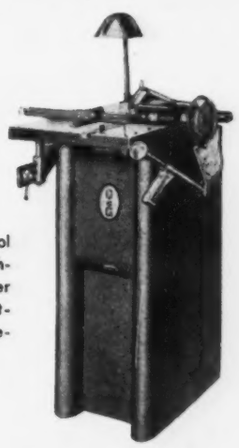
For routing operations, plate corrections, mortising, and type-high planing, you'll save time and money with the Morrison Router and Type-High Planer. Works faster and efficiently, saving make-ready time by having all cuts precision height.

17" throat radius allows routing to center of a 34" cut. Routing depth quickly set by handwheel adjustment. Exclusive Morrison micrometer height gauge guarantees precision. Large work table with straight line guide, sub-table for holding small cuts. Full width foot treadle. ½ HP universal high speed motor, direct drive.

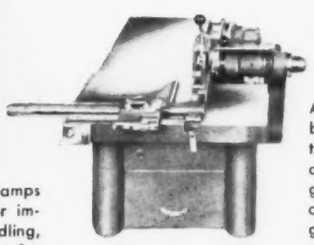
MORRISON SLUG STRIPPER

"Proves itself to the men, within 24 hours." Makes it easy to strip the face of any slug or type character to the exact thickness needed for base heights.

MORRISON MODEL 45 SAW TRIMMER



Model 45 has pistol grip saw blade attachment. Features "Trigger Speed" saw adjustment and many time-saving advantages.



MORRISON MODEL "45" SPECIAL SAW TRIMMER

A low-cost saw trimmer that embodies most of the features of the higher priced Model "45" and Model 3-A. "Behind the gauge" work clamp is standard, conventional "ahead of the gauge" clamps is optional equipment. Also available in a cabinet model.

Other Morrison Equipment includes: Strip material cabinets, waste receptacles, Universal saw blades, router bits, and jig saw blades

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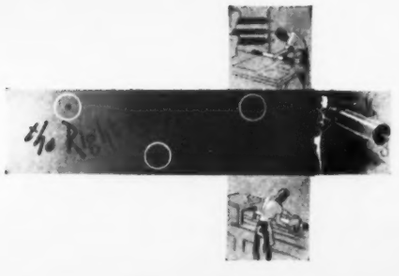

CHICAGO	DES MOINES	KANSAS CITY	PITTSBURGH
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SAM'L BINGHAM'S SON MFG. CO.

MANUFACTURERS OF

PRINTERS' ROLLERS

Equipment & Supplies

(Continued from Page 14)

The new letterpress inks will at first be available in five colors and are best suited for printing line work, bold face type and solid areas. They are not recommended for halftone or other screen work, since the heaviest ink film possible is required to give satisfactory fluorescence. Some piling may be encountered on certain stocks or with poor makeready.

The degree of daylight fluorescent brightness varies with the type of stock used, thickness of ink film, and type of illumination under which the inks are viewed. The extra brightness is enhanced by fluorescent lighting, and is much more striking if areas covered by the inks are surrounded with a dark, contrasting solid color — particularly a dull black. Fluorescence is obtained with ultraviolet (black) light.

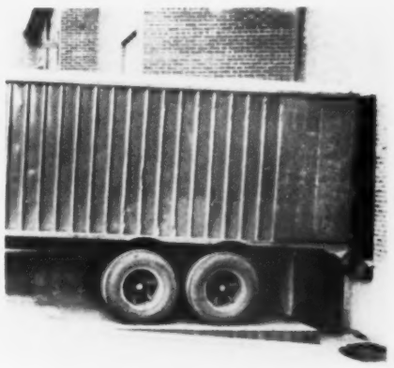
The right stock must be selected to get the best results from the new Day-Glo inks. A white stock is required—the whiter the better. Cast coated stocks such as Champion Kromekote and Warren Lusterkote are reported to give the best results. Printers will get little or no fluorescence if they attempt to use these inks on dark rough stocks such as unbleached kraft, jute, or news. Any of the letterpress inks can be overprinted with other IPI fluorescent letterpress ink as well as with regular oil inks and varnishes. All of these colors are semi-opaque and should not be used where a fully transparent ink is required.

Drying time can be varied to suit the requirements of each particular job. Drying characteristics are about the same as those of regular letterpress inks of equivalent types.

Reduction of these colors for tints is not recommended. Full pigment strength is needed for satisfactory fluorescence. Extenders should also be avoided. Caution should be used in blending these inks to obtain intermediate shades, otherwise loss of fluorescence may result. Complete information may be obtained by mentioning PEE No. 617 in your request.

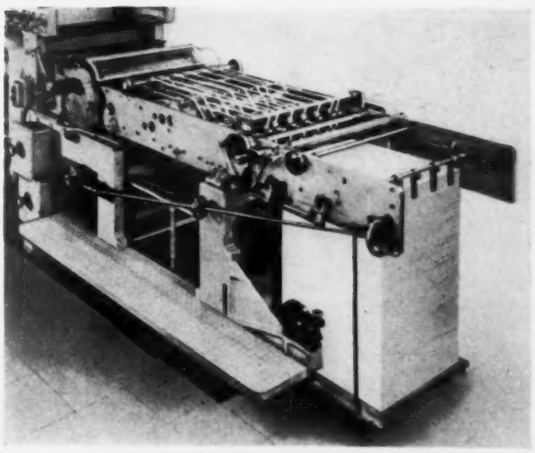
Raises or Lowers Trucks to Dock Height

THE Adjust-a-Truck, a device designed to raise or lower highway trucks to proper dock unloading height, has been introduced by Rowe Methods Inc. As shown in the accompanying illustration, the unit is installed in the pavement in front of the dock.



By means of a heavy duty electric hydraulic system each vehicle is adjusted to the unloading height of the dock. Capacity of the Adjust-A-Truck is 40,000 lbs. Standard deck size is 10 ft. by 12 ft. with a 9 ft. by 12 ft. model also available. A double push button station controls the raising and lowering of the platform. If additional information is desired, please refer to PEE No. 608.

Rotary Sheeter and Stream Delivery — American Type Founders has announced the ATF-Klingrose Rotary Sheeter and Stream Delivery for continuous rotogravure press operation with delivery of either cut sheets or rewound rolls. Sponsor states the unit is designed for sheeting speeds up to 15,000 sheets per hr. Rotating sheet cutter is driven by a 360 deg. running register planetary gear box. This provides cut-off sheets of any length within the circumferential range of the press. Prior to the sheeting operation, adjustable rotating circular knives shear cut the web edges for guide use in subsequent operation. Explosion proof high frequency static eliminators are also provided. After the sheeting station, the cut sheets are separated by jets of aid which guide the sheets onto a slower speed fabric belt delivery where the sheets are overlapped into a continuous stream. The delivery table is lowered automatically according to the thickness of the stock. The sheeter will accommodate any thickness of stock providing it has sufficient stiffness for pile jogging. More information on the ATF unit is available by mentioning PEE No. 625 in your request.



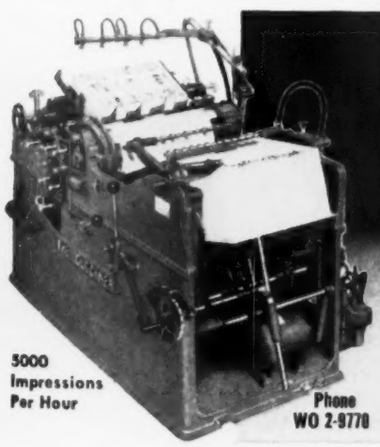
Copper Brite Cleaner

COPPER Brite, Inc., has developed a cleaner for copper surfaces which originally was designed for cleaning copper bottoms of utensils. Recently, tests showed that it is useful for cleaning rotogravure printing cylinders for removing dried ink and oxidation particularly in the ink cells of the cylinders previous to the chrome plating operation. It may also be used for cleaning dried ink in the interstices between dots in copper halftone photoengravings. Copper Brite solution is supplied in bottles ready for use. Further information may be obtained by mentioning PEE No. 611 in your request.

R.O.P. Color Standards

LAKE SHORE Electrotype Div., Electrographic Corp., has released a 12-page booklet containing information compiled in a survey conducted among newspapers to determine quality standards for mechanical phases of R.O.P. color advertising. It is entitled *Recommended Quality Standards for Use by Advertisers, Agencies and Engravers.* The contents include specifications for proper preparation of art work, engravings and

(*Continued on Page 35*)



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PRINTING
EQUIPMENT
Engineer

May 1953

The Relation of Paper and Moisture

By WILLIAM H. BUREAU*

**Butler Paper Corporations, Chicago.*

Part I.

WHY does paper behave as it does? How do changes in its atmospheric surroundings affect its performance in the pressroom?

First, remember water is ever present in paper and plays a very important role in manufacturing. In the initial forming of paper fibers into an interwoven structure on the paper machine, paper is approximately 90% water by weight. When the finished paper leaves the machine it normally contains 5% to 6% moisture.

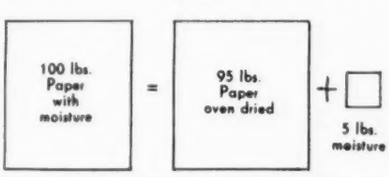


Fig. 1.—Moisture content. Diagrammatic example is illustrative of paper with 5% moisture.

Paper is composed of cellulose. Cellulose (in common with other organic materials of fibrous structure such as wood, leather, textiles) has a moisture content dependent upon the surrounding atmosphere. Let us examine the relationship between moisture content and atmospheric conditions and how this influences paper behavior. This involves two terms to be kept in mind: (1) Moisture content of the paper; (2) Relative humidity of the air.

Moisture is held between the fibers and within the individual fibers, and is expressed as a percentage of the total weight of the paper. Thus, if 100 lbs. of paper contained 5 lbs. of moisture, the moisture would be 5% (See Fig. 1).

Relative Humidity Defined

Relative humidity refers to the ratio of the amount of water vapor actually in the air to the maximum amount the air could hold at the same temperature or simply the extent to which air is saturated. When air is saturated with water vapor, precipitation of water occurs as rain or fog. So, a relative humidity of 50%, for example, in a pressroom means the air is 50% of being completely saturated at the given temperature.

The moisture content of paper exposed to the atmosphere will vary as the relative humidity of the air surrounding it also varies. Any given sheet of paper when exposed at a given relative humidity will reach a moisture content that doesn't change and this is known as the equilibrium moisture content.

For papers as an average, the moisture content will be about 6% in a surrounding air of 50% relative humidity. The moisture content will change 1% for a change of about 10% in the relative humidity of the surrounding atmosphere.

Fibers Change Dimension

Visualize a single paper fiber enlarged to the size of a pencil. If this fiber absorbs more moisture from the atmosphere, it will not only increase in length, but swell in circumference, and percentage wise its enlargement in circumference will be many times its increase in length. Likewise, if it loses moisture, it shrinks much

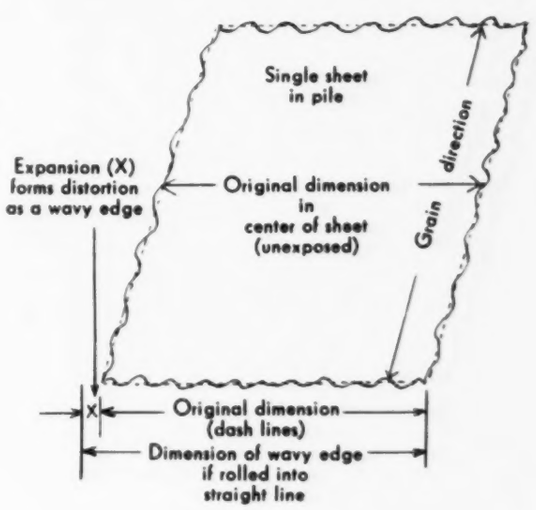


Fig. 2.—Edge distortion in paper when edges only absorb moisture.

more percentagewise in circumference than in length.

When a sheet of paper undergoes moisture change, not only does each individual fiber contract or swell, but also each fiber moves in relationship to neighboring fibers. Papers whose fibers are very closely compacted, such as greaseproof and glassine, provide very little interfiber space to allow for movement of fibers and consequently have a relatively high dimensional change. Other papers having larger spaces between fibers have a means of internally allowing for changes in fiber dimension and fiber to fiber movement and therefore have much lesser degree of dimensional change. Blotting paper is an example of the latter group. Thus, the sum total of the swelling or contracting of all the individual fibers and the movement of each with respect to each other may be thought of as being partly absorbed within the paper structure and the balance translated into an external measurable change known as change in dimension or coefficient of expansion or contraction. While papers depending upon their types differ considerably in their responsiveness to changes in dimensions, none are inert to dimensional change upon variation in moisture content. For special requirements where paper must have a minimum or practically zero coefficient of contraction and expansion such as for geodetic maps, paper is mounted to metal foil.

Force Exerted by Fiber Expansion

Under ordinary conditions, the forces resulting from expansion of fibers are never challenged but an example of the tremendous forces that swelling fibers can create is the bulging of steel railroad cars filled with watersoaked paper due to floods.

This characteristic of all paper fibers, accounts not only for changes in paper dimension, but also the fact that a sheet of paper always changes dimension much more across its grain than it does with its grain per given unit of length. Long grain paper assures a lesser total change of dimension.

We, therefore, think of paper as a fabrication of moisture sensitive fibers that will readjust their moisture content if exposed to changes in their atmospheric surroundings and in so doing, change their dimensions. Change of dimension is proportional to moisture change. Misregister, wavy edges, baggy centers, curl, and other annoying behavior all relate to this.

What Happens in R.H. Change

Consider, a pile of paper of uniform moisture throughout and in equilibrium with the air: Paper is flat and edges are straight. Now the relative humidity of the air increases 25% which is common during summer months. The edges absorb moisture, fibers swell and the edges increase in length. The inner portion of the pile, not having access to the air, remains unchanged. Any given sheet is no longer of uniform width and length. The excess dimensions of the outer portion of the pile must cause a distortion in the form of a wave (Fig. 2). This condition can be avoided by hanging the paper so all portions of each sheet have access to the new atmosphere and change equally or preventing the changed atmosphere from reaching the pile by sealing it in its original atmosphere. To accomplish the latter perfectly would necessitate hermetically sealing the pile which is difficult to do. Waterproof paper wrappers (asphalt laminated) tightly wrapped around all sides of the pile and sealed at overlaps greatly retard the moisture absorption at the edges and if the rate of absorption is sufficiently slow, the absorbed moisture will have a chance to permeate throughout the pile and avoid distortion. Moisture will enter tucked ends of waterproof wrappers or through the bottom of the pile unless it, too, rests on moistureproof wrappers. Fabricated plastic sleeves or bags that fit snugly around paper piles provide a good barrier to moisture vapor and offer excellent protection in this respect.

Moisture changes and paper behavior are not confined to sheet stock, but also manifest themselves in roll stock. Moisture absorption or loss at ends of rolls can cause ends to be harder or softer than middle portions and uneven draws in the web as they are unwound.

Seasoning in Cold Weather

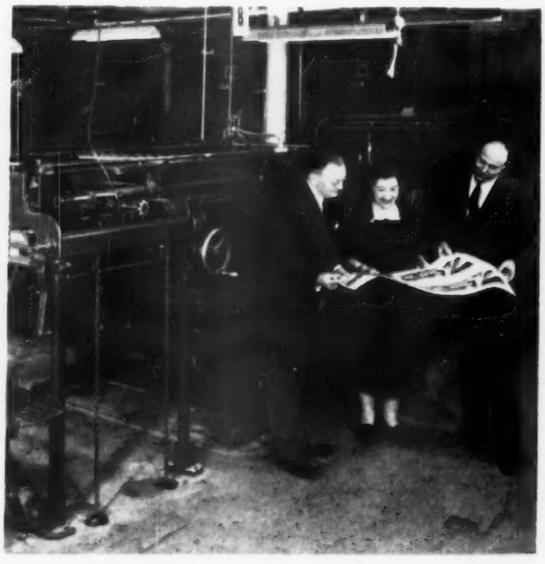
Of interest to every printer is the seasoning of paper during cold weather. Not only must moisture be considered but temperature must be considered as well. Paper is commonly stored in warehouses much colder than the pressroom. The U. S. Bureau of Standards has found that the average pile of cold paper will warm to room temperature at the rate of approx. 20 deg. F. per 24 hrs. For a large pile of paper transferred from a frigid warehouse to a pressroom at 80 deg. F., it may take as much as three days for paper to completely reach pressroom temperature. The wrapper of a cold pile of paper that has been brought to the pressroom should never be removed and the exposed pile left to warm to pressroom temperature. Cold and exposed edges will actually cause the moisture in the air to condense thereon, and the absorbed moisture results in wavy edges. A sound rule is to leave the original wrappers intact until the paper reaches pressroom temperature.

Wavy edges once they develop in many papers may permanently distort the sheet. Hanging the paper or blowing hot, dry air on the edges will often reduce the waviness.

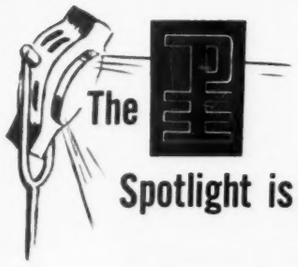
The reverse condition of wavy edges results where the outer portions of the pile lose moisture to relatively drier air. Shrinkage in dimension causes tight edges with an excess of paper in the center portion of the pile causing buckles or a baggy center.

Paper piles should be well protected by a vapor barrier type wrapper at all times not only prior to printing but between successive printing operations such as multicolor work, particularly so, if it was not seasoned by hanging prior to printing, and is used where relative humidity of the air does vary.

Printing Equipment Engineer Classified Ads may be found on Page 63.



Completing Modernization Program—An expansion and modernization program is being completed by Pandick Press, Inc., 22 Thames St., New York 6, N. Y. Miss A. C. Pandick, President, and H. Wayne Oakley, Vice President, two of the original founders in 1923, still are actively engaged in conducting the business. Over 400 people are employed and present total plant floor space is in excess of 50,000 sq. ft. Growth of Pandick Press, Inc., is marked by transition from legal and corporate printing to include financial and color printing. The firm executes for its customers stockholder relations material an elaborate and colorful annual reports and brochures. The present pressroom consists of 15 Miehle as well as other presses. Modernization of the plant includes an automatic electric elevator for transporting forms and paper supplies between production floors. A pneumatic tube system now being installed carries copy and proofs automatically between office and composing room. Two Miehle two-color and two Miehle H single color presses were included in the pressroom expansion. Shown in the accompanying illustration is Miss Pandick and Mr. Oakley (left) with Richard Hirst, New York Miehle representative.



Raymond Blattenberger

PRESIDENT Dwight D. Eisenhower's nomination of Raymond Blattenberger, Senior Vice Pres. of Edward Stern & Co., Philadelphia, as Public Printer of the United States was confirmed by the Senate on April 15. Blattenberger succeeds John J. Deviny who retired on February 28 from managing the world's largest printing plant.

The new Public Printer has a wide acquaintance throughout the printing and publishing industries and is prominent in Graphic Arts trade association activities. He is 61 years old. He began his career in the pressroom of William Mann & Co., Philadelphia, in 1906 at the age of 14. During this period he studied at nights at Temple University, graduating in 1911.

He joined the Stern company in 1917 and worked in sales until 1935, when he was moved to perform the important role of managing the plant. At the end of that same year he was made Stern's vice president in charge of production.

He remained in production until the end of 1938, after which he again went back to selling and, in addition was given the responsibilities for trade and labor relations. At the time of his appointment to the high government post, Blattenberger still conducted the handling of sales and labor relations for Stern.

He has served in a number of important capacities including president of both the Typothetae of Philadelphia and the United Typothetae of America. Mr. Blattenberger has continued active in the work of both local and national associations which are now known as Printing Industries of Philadelphia and Printing Industry of America. For a number of years he was also a director of the National Assoc. of Photo-Lithographers.

RAYMOND BLATTENBERGER

The GPO head has two sons, R. Walter and J. William Blattenberger. He is a member of the Union League Club, Downtown Club and Poor Richard Club, and an elder in the Presbyterian Church. For a number of years he has been a resident of Haddonfield, N. J.

ANPA Exhibitors Announced

Nearly 50 companies will exhibit equipment, supplies and methods during the ANPA Mechanical Conference, Milwaukee, Wis., June 15-18, at the Auditorium-Arena. All available display space has been engaged. The exhibiting firms are as follows:

Company	Booth No.
Alico, Inc.	62
American Type Founders, Inc.	39, 40
Atlantic Zinc Works, Inc.	85, 86
Baker-Raulang Co.	28, 29
Sam'l Bingham's Son Mfg. Co.	78, 79, 80
Capital Tool & Mfg. Co.	52
Cascade Saw & Tool Co.	30
Chemco Photoproducts Co., Inc.	88, 89, 90
Craftint Mfg. Co.	20
Cutler-Hammer, Inc.	31, 32, 33
Fairchild Camera & Instrument Corp.	49, 50
Federated Metals Division	12, 13
General Electric Co.	66, 67, 68
Hamilton Manufacturing Co.	41, 42, 43, 44
Hammond Machinery Builders, Inc.	14, 15, 16, 17
Harteo Manufacturing Co.	34
Hartzell Machine Works	64
Imperial Type Metal Co.	60, 61
International Newspaper Supply Corp.	55
The C. M. Kemp Mfg. Co.	54
Lake Shore Electrotype Div., Electrographic Corporation	45, 46, 47, 48
Linotype Parts Co., Inc.	57
Ludlow Typograph Co.	81, 82
Matrix Contrast Corp.	69
Mayville Metal Products Co.	87
Minnesota Mining & Mfg. Co.	91, 92
Monomelt Company, Inc.	35
The Morrison Co.	36, 37, 38
Nolan Corporation	75, 76, 77
North American Products Co.	65
Pantone Engineering & Mfg. Co.	51
Paper Manufacturers Co.	1, 2
Parsons & Whittemore, Inc.	25
Printing Equipment Engineer	56
J. A. Richards Co.	7, 8
Robertson Photo-mechanix, Inc.	83, 84
H. B. Rouse & Co.	18, 19
Signode Steel Strapping Co.	27
Sta-Hi Corporation	9, 10
The Strong Electric Corp.	63
Teletypesetter Corporation	3, 4, 5, 6
Tingue, Brown & Co.	11
Unitronics, Inc.	72, 73, 74
Vandercook & Sons, Inc.	21, 22, 23, 24
W. W. Warfel	26
Wesel Manufacturing Co.	70, 71
Wiretyer Corporation	53
Wood Newspaper Machinery Corp.	58, 59

It's a Notable Achievement

The *Run of Paper Color Service* for newspapers is a notable achievement. Initially, the service was announced in April. It is a new and separate department of *The Milwaukee Journal* operating in cooperation with Lake Shore Electrotype Div. of Electrographic Corporation. It is intended to provide subscribing newspapers with a variety of editorial and advertising units, some in plastic plate or mat form. The *Weekly Color File* will contain tear sheets and proofs of subjects for which edition mats can be furnished on a 48 hr. basis. These units will be furnished in two, three and four colors, from simple benday and tint work to process color.

Concurrently with a few other metropolitan newspapers, the *Journal* has pioneered in newspaper r.o.p. color printing for some time. The reason for making comment that this new service is a notable achievement is that newspaper color with the exception of a limited number of papers has not been standardized. It might as well be said frankly that artists, layout men, engravers, stereotypers and pressmen have been unable to achieve reproduction similarity. This is partly due to copy preparation, processes, and partly to mechanical methods, plus lack of experience in handling color printing on a "sudden" basis such as exists in the newspaper plant.

The new service will permit subscribers to watch the work of other subscribers and to compare results since the mats to be furnished will come from a single source. At the moment, there may be sources of color mats which do not conform strictly to *Journal* standards. Eventually, however, it appears that subscribing newspapers (and others who do not subscribe directly) will more nearly reach likeness than by any other means.

We would rather not say that newspaper color reproduction materials must be formulated according to the limitations of the newspaper printing process. What we want to say is that reproduction material must be suited to the newspaper printing process. Newspapers must print on paper which isn't suited to color printing when judged by commercial printing standards. Therefore, meticulous care must be taken to secure maximum results. The *Journal's* flying wedge into newspaper r.o.p. color service for use by many certainly should help in the achievement of acceptable color for the reader. Good newspaper color will contribute immeasurably to the prosperity of the newspaper itself.

Resplendent in sparkling cover, this 13½ in. by 17½ in. portfolio carried announcement of Milwaukee Journal's r.o.p. color service to subscribers. Encased in transparent Cellophane with brilliant four color design on board cover, the portfolio contains explanations of the service and a number of newspaper tear sheets printed in color for editorial and advertising use.

From Stone Age to Bi-Metal

By AXEL LUNDBYE

IV.

IT CAN be seen that we have four main classifications of bi and tri-metallic printing plates: (1) Selective electrolytical deposition of metal on either printing or non-printing area; (2) Selective etch of metal on either printing or non-printing area; (3) Selective chemical precipitation or vaporization of metals on printing or non-printing area, and (4) Miscellaneous.

KEY TO LETTERS

Used in Figs. 1 to 12 inc.

L	Light
F	Film negative or positive
(RLS)	Resist light sensitive
B	Base metal
IR	Ink receptive
WR	Water sensitive
R	Hardened light sensitive resist
I	Lithographic ink

The classifications can be set up as follows:

Classification:	Figure Numbers:
1	Plates Nos. 1,8,11,12
2	Plates Nos. 2,3,4,5,6,9,10
3	Plates Nos. 7,9,11
4	Plates Nos. 8

It will be noted that some of the plates are to be found in more than one classification. The reason is that the plates can be produced in more than one way. From the 12 plates described, it can easily be seen that all or most of them have patent protection. One of these days there will be a grand free-for-all because many of them, as we see the picture, are interlocking. We doubt very much if it will be possible to obtain patent protection for additional plates, and if the patent is issued, we will consider it an engraved invitation to a law suit. Therefore, in the plate field, some agreement will have to be made among the different manufacturers.

The explanation of the above 12 plates is only an indication of how these plates are produced. It might be interesting to give the detail of one of them, and in that case, we'll take the best known and most used plate both here and in Europe—the Aller plate.

As already stated, the Aller plate is of stainless steel base and it has to be copper plated before it is used as an offset printing plate. But Aller found a long time ago, that even when he used his special sulphate plating bath, he had great difficulty in getting good copper deposit the first time he tried to plate a new stainless steel sheet. Consequently, he had to plate, strip, replate a new plate at least three times, sometimes more, before he got what he considered a good enough copper surface on the stainless steel. A new plate is submerged under a slight reverse current density in a weak acid solution for approx. 5 to 7 min. (This solution is one of the secrets to Aller's success. Therefore he is not readily going to pass the chemical contents of this solution to the trade.) The main reason for this treatment must be to put teeth into the base plate. As Aller says, we would call it chemical graining. After the predetermined time, the plate is taken out, washed, and placed in a special copper sulphate solution, and plated at a low current density at approx. 7½ amp. per sq. ft. Assume this plating bath has an efficiency of approx. 90%, and the plate is left in the bath for 7 to 8 min., then we would have a plate thickness of approximately 5 microns, which is approx. 0.0002 in., and in case of new plates described above, the plate is stripped of copper. The solution in the stripping tank undoubtedly is diluted nitric acid solution. The plate is left in this tank up to the time all copper has been removed. Then it is washed in running water and placed in the plating tank. This process is repeated until a satisfactory deposit is obtained. For plates that have already been used for printing, stripping and plating is required only once.

After we have a satisfactory copper plate, it is coated with a gum to keep the copper from oxidizing.

Preparation of Plate for Whirler

First the gum is removed, and the plate is washed in a very weak solution of H_2SO_4 (Sulphuric Acid) which is poured onto the copper surface of the plate. Then the plate is scoured with a cotton swab and fine pumice powder or chalk. This operation is continued until we have a very bright surface on the copper. Care must be taken not to scratch it. Therefore, the pumice must be very fine. Now the plate is rinsed thoroughly in running

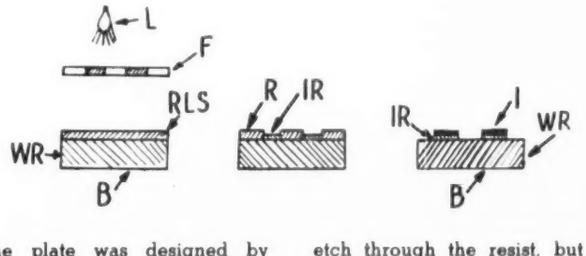


Fig. 10.—The plate was designed by Torston Petren and E. K. Stenberg of Ahlen & Akerlunds Forlag, Stockholm, Sweden. During our visit with Messrs. Petren and Bergstrom in Stockholm, we had an interesting discussion regarding the development. These gentlemen claim the following for their plates: The need for expensive electroplating equipment is totally eliminated; no etching table or no etch is required. The chemical precipitation layer of metal is very thin, in many cases, so thin that the underlayer surface reflects through. Besides, a very smooth base plate can be used, due to the elimination of graining. Consequently there is little or no loss noted in the printing qualities of the printing product. Gumming of the plate is unnecessary when not in use. However, that still holds true with most of the bi and tri-metallic plates. They further claim that they obtain extremely long runs. We would like to add that there is more than one reason for the extreme sharpness in the dot that they claim to get with their plate. The one given above (the smoothness of the base) might have something to do with it. But we think the main reason why they obtain the sharpness is that they do not etch through the resist, but deposit the metal. If the resist has a very straight and sharp outline, it will be a true reproduction of the positive. Then the reproduction in the printing plates will be as stated, sharp and straight. On the other hand, etching, any etching, will have a tendency to give a ragged outline even though the dot in the film was sharp and straight. Besides in the etching process, there will be a tendency to enlarge the dot.

The process for these plates is as follows: The base plate (B) consists of chromium (WR) water receptive, or stainless steel. Then these surfaces may be coated with any of the well known light sensitive resists (RLS) and printing down for a positive (F) by means of light source (L). Then develop, and finally treat the printing area with a hardened resist with a chemical containing copper salt, which will precipitate a copper surface on the stainless steel. We assume that the chemical contains a cuprous chloride. Then the hardened resist (R) is removed, they claim by water only, and the plate is ready. No desensitization is required. Again we have the two extremes—copper and chrome on the ink, water receptive scale (IR) and (WR).

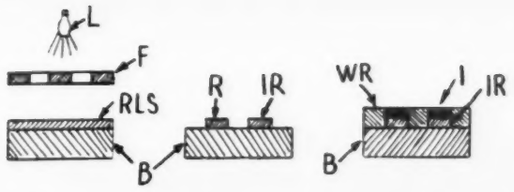


Fig. 11.—Blau Plate. He designed his plate as a base (B) of polished brass or steel. After proper cleaning, it is coated with a light sensitive bichromate shellac (RLS). The plate is printed down from a negative (F) film, and then developed and washed in water. It is then dried and warmed to approx. 120 deg. to remove the unhardened shellac. The hardened shellac is the hardened resist (R), but in this case, it is also (IR) ink receptive. Then nickel or zinc is electrolytically deposited where no hardened resist (R) is left. The nickel or zinc will then become the (WR) water receptive surface. By studying an old U. S. patent No. 1,151,459, issued to F. A. H. Hatt in 1915, quite a lot of similarity between Blau and Hatt can be found.

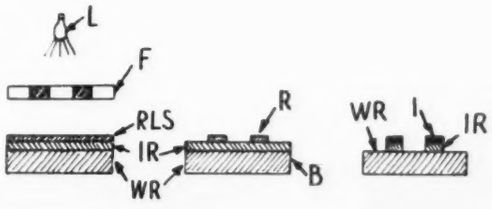


Fig. 12.—Claes Aller Plate—British Patent No. 483,349, 4-19-38; U. S. Patent No. 2,214,950, 9-17-40 and German Patent, 7-10-36. This plate is probably the best known and talked of bi-metallic plate in Europe and the United States among lithographers. It is the one most mentioned, and we think it was the first one used in production printing anywhere, namely, at Aller Press, Ltd., Copenhagen, Denmark, in 1940. It is still used there. Some fine work has been done with these plates, on hard newsprint paper as well as on coated paper. The press on which the plate is used at Aller is run at approximately 700 f.p.m., 2 color one side, 4 color the other side, size of plate 41 in. by 55 in.

Claes Aller of the Aller Press Ltd., Copenhagen, was the inventor of the plate and press. These plates are distributed by Fred'k H. Levey Co. here in the U. S., and also by R. Hoe & Crabtree, Ltd., in England. When the plate was first introduced, it was to be used with a negative laydown, but now it can be used with either a positive or negative laydown. The base plate (B) is stainless steel. Being stainless steel, it is (WR) water receptive. These base plates are plated with sulphate copper electrolytically, with a thickness of 0.0002 in. It is coated with a light sensitive coating (RLS) and a positive or negative (F) is printed down by means of the light source (L), then developed. The non-printing area is etched through the copper to the stainless steel. Then the hardened resist (R) is removed and plate is inked up and ready for printing. Aller, in his patents, also covered several ideas for coating stainless steel, such as spraying copper or by vaporizing the copper to the base, or by chemical precipitation of copper. Again we have the two extremes on the ink and water receptive scale—namely, chromium and copper.

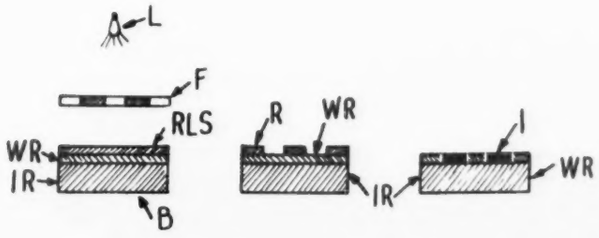


Fig. 13.—Coates Bros. & Co., Ltd., Plate. This plate is one of the newcomers in the bi-metallic printing plate field. The plate looks very much like the Time-Life printing plate. The base (B) is ungrained copper sheet, chromium plated, the chromium being the (WR) water receptive and the copper (B) is the (IR) ink receptive. The chromium surface is coated with light sensitive coating (RLS). Any of the standard materials can be used. Then the coating is exposed to a positive (F) film by means of (L) light source. It is developed, and the chromium is removed from the printing area by either still etching or by reverse plating. In this manner the printing area (copper) is bared. Again we have two extremes on the ink and water receptive scale, those of chromium and copper.

water, being sure that all the pumice is removed. Place the plate in the whirler and start spinning. Immediately pour in some very weak sulphuric acid solution on the plate to be sure that all oxides are removed. Flush plate preferably with distilled water. After that, start pouring some of the light sensitive resist (again, one of Aller's secret formulas) on the whirling wet plate. The speed of the whirler depends on the size of the plate, but 60 to 80 r.p.m. is considered good practice. The plate should be whirled until it is completely dry. Heat can be used to speed up the drying, but the temperature should never be in excess of 100 deg. F. The relative humidity which is very important, should be controlled between 50% and 65%.

Exposing the Plate

After the plate has been removed from the whirler, it is placed in a vacuum frame, and exposed for pre-determined time. Aller states that under average light conditions, the exposure is about 1 min. We might ask, what is Aller's light condition? That is an abstract, and this time element will have to be found by each individual shop. Shorter than average exposure will give a full image, and longer exposure will give a sharp image. After we have once determined the right exposure time, then we will consider it important to install one of the many light integrating meters. In other words, instead of measuring time, we will now measure light impulses in a given time. Fluorescent light can be used for exposure in the vacuum frame, or a water cooled incandescent light may be used. In the two last cases the only variation that we will have in the light source will be the voltage variation in the lines. Most lines, however, are provided with voltage regulation.

For diagram of the different light sources, look at Figs. 1, 2 and 3. In Fig. 1 is indicated a carbon arc light. In Fig. 3 is indicated a fluorescent light for exposing the plate. The fluorescent light is used by one of the larger rotogravure printers for printing carbon tissue. In Fig. 2 is indicated a water cooled incandescent light used in connection with the printing frame.

Developing the Plate

After the plate has been exposed, it is placed on a specially built table. Some developer (secret formula by Aller) is poured on the plate and rubbed with a developing powder. After an elapsed time (approx. 2 min.) the developing fluid is squeezed off. A second application of developing fluid is now poured on the plate, and the process is repeated.

When finally the second developing fluid is removed from the plate, another (Aller formula) resist is poured on the plate and rubbed with a second developing pad. Never use the same developing pad for more than one operation. During this rubbing operation, the old image area should turn to a silver-like appearance. Should any of the image area not take a bright silvery appearance, chances

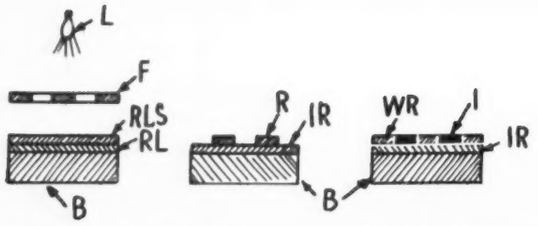


Fig. 14.—Kable-Lundbye Plate. The base (B) is stainless steel, steel plate, zinc, or aluminum plate, copper plated (IR) ink receptive. The plate is coated with light sensitive coating (RLS). These materials when hardened must be able to withstand the oxidizing action of the chromium plating baths. Therefore, it is a bi-chromate with a base of thermoplastic material. After coating, the (F) positive is printed down and developed. The unhardened resist is removed, and the (R) hardened resist will be the printing area. Then chromium is deposited in the open area either by vaporization (dry plating) or by electrolytical means—only about 0.00005 in. thick, or less. This chromium will then be the (WR) water receptive surface. The hardened resist (R) is removed, and under the hardened resist we will find the copper surface (IR) ink receptive. Then the plate is inked, and ready for printing. Again we have the two extremes on the ink and water receptive scale, chromium and copper. It will be noted that we do not etch. Therefore we should have a cleaner and straighter dot outline.

Fig. 15.—Boekelman's and Elfer's Plate, covered by British Patent No. 446,775. This plate is similar to Fig. 5, but here a copper base plate is used in comparison to Fig. 5, where a steel base is preferred. The base (B) is a copper plate on which lead is deposited electrolytically through the hardened resist (R). Then the hardened resist is removed, baring the copper surface. The lead is the (WR) water receptive and the copper is the (IR) ink receptive. Here we have only one of the surfaces on the extreme end of the scale, namely, copper. Using these plates for printing is quite difficult because the softness of the lead will make the plate flatten out under very slight pressure. Therefore, it can only be used in high precision presses, which must be packed just right. Besides that, a slight abrasiveness of the paper will show excessive wear on the lead.

are that the plate is not developed sufficiently. In such cases, remove the resist and apply another application of the developer. Then try again with the resist. This resist is (resist No. 1 solution) R-1-S. After the image is completely silvered, the old area is washed thoroughly with alcohol and then completely dried. Then another resist (Aller formula) R-2-S is applied to the plate and spread out in an even film over the whole plate area, dried, and again another resist (Aller formula) R-3-S is spread over the whole plate in a uniform thickness film. This resist should be heavy enough to coat the plate so that the plate looks dark, but not so heavy that it will be difficult to wash off in the non-printing area. After the resist has dried, the plate is dusted with talc and rubbed lightly. Then the plate is submerged in water and again rubbed with a cotton pad until the resist is removed completely from the non-printing area. This operation should be done in running water. Then the plate is flooded with a dilute sulphuric acid (H_2SO_4), approx. 4 oz. acid to 124 oz. water to equal 1 gal. The acid solution can also be made up of 8 oz. phosphoric acid and 120 oz. water and again we have 1 gal. After the acid solution has been placed on the plate, it is rubbed with a cotton swab, and in this manner the original stencil is removed completely.

If staging is required, now is the time. Use the standard procedure for staging in the trade today. Broken lines and other repair work can be done now. However, the plate must be dried before applying lacquer or asphaltum on the portion of the copper where we intend to do the repairs. We recommend that rubber gloves be used in the above operation, but in the following operation, *it is mandatory that they be used.*

(*To Be Continued*)

An Invitation To Our Readers

This is an invitation to share your knowledge regarding any device developed in your plant which has been the means for solving a production or mechanical problem. Or, perhaps you have devised a method for handling certain types of work in process. Other readers will appreciate the help extended by you when they read about it in *Printing Equipment Engineer.*

Just write informally in a letter and enclose a rough diagram, sketch or photo. The Editor will be glad to cooperate in getting the message to our readers.

Address: Editor, *Printing Equipment Engineer*, 1276 W. Third St., Cleveland 13, O.

Newspaper Mechanical Conferences – Are Further Consolidations in Order?

IN MARCH, announcement was made of the consolidation of the Kansas and Missouri Newspaper Mechanical Conferences. The new group will be called the Kansas-Missouri Mechanical Conference. It is also noted that some time ago the Pennsylvania and New Jersey mechanical conferences were consolidated into one group which is now known as the Mid-Atlantic Mechanical Conference.

It has been suggested to *Printing Equipment Engineer* that some of the executives in a state where there is no mechanical conference could very well become identified with one of the nearest existing conferences rather than attempt further organization of new mechanical bodies.

At the present time, but not including the dominant country-wide ANPA Mechanical Conference, there are 11 regional newspaper mechanical conferences. The territorial jurisdiction claimed by each in some cases is nebulous but it appears that the existing conferences can serve the needs of all in states where executives feel they are not now a part of the nearest conference.

A further suggestion has been made that since the trend is toward fewer regional conferences, perhaps other consolidations could be effected. This movement, of course, is strictly a prerogative of the executives who would be affected by any proposed consolidation. We are well aware, too, of the fact that willingness to consolidate with another group would be dependent largely upon geographical distance. Several other factors enter into the picture. Everybody likes to feel he is running something and he has a chance to express his individuality in a group. Some executives might feel they will lose either personal or group identity if a consolidation were to be put into effect. As is the case with other trade associations in the Graphic Arts industry, the equipment and supplier manufacturers are expected to and do support many of the Graphic Arts conferences with substantial contributions and by furnishing program speakers. Frequent objection has been made by manufacturer and supplier executives that the multiplicity of trade association conferences often is a burden on company finances and a heavy demand on the time of their representatives.

We do know that printing executives of all types are a gregarious lot—they love to talk about their businesses whether it be from the management or production angle. They certainly do benefit from fellow association at these meetings. The industry is a better industry because of such fraternization. Perhaps further consolidations can be effected in the interests of higher quality meetings with greater attendance. We believe both the Penn.-N. J. and the Kas.-Mo. consolidations will gain substantially by their common actions.

Inside Story

New Building Addition

Grand Rapids *Press*

ALL mechanical departments of the Grand Rapids (Mich.) *Press* have shared in acquiring adequate space and new equipment in an expansion and rebuilding program recently completed. Complementing a building constructed for the *Press* in 1907 is an L shaped addition which has increased floor space of the newspaper by 40 per cent. In noting its growth and modernization, the *Press* issued a special 60th anniversary supplement on February 14 in which it observes the 1893 paper had 12 short columns daily compared with today's average of 124 full columns.

Among the noticeable changes which have taken place on the Grand Rapids paper are installation of four more press units, a modern mail room, new composing room and photo studios, and improvements in the editorial, display advertising and classified advertising departments.

Three-Dimension Floor Plans

The new arrangement can be seen in the accompanying three-dimensional floor plan diagrams showing the location of the departments on each of the three floors. A fourth floor at the *Press* is also used to accommodate a lunch room, storage area and the building's air conditioning system.

The pressroom on the first floor is equipped with 16 Scott newspaper press units with a capacity of 105 thousand 48 page papers per hour or 126 thousand 32 page papers per hour. Four new press units were added to obtain the increase in production.

An ink mist removal system in the pressroom consists of four Auto Airmat filters located between three presses. Each two filters are connected to a two-speed motor and fan enabling four different exhaust combinations to be worked out depending on the press units being used at any one time. The exhaust ducts are suspended alongside the press units with the openings close to the formers so that the maximum amount of ink mist can be picked up.

Modern Mailing Operations

A completely modern mail room has been built and located also on the ground floor. The department has been equipped with two Wallastar automatic bundle tying machines connected at each end of a Jampol feeder table. Automatic conveyor belts carry the tied bundles to the trucks at the loading dock outside the building.

More space has been allotted on the second floor for the composing room's 24 Intertype and Linotype linecasting machines, saw trimmers, page trucks, make-up tables and other equipment. The Monotype department was expanded and a Monotype Giant Caster installed. A Vandercook page proof press was also added to the composing room.

The building was designed to permit floor loading in the composing room of 200 lbs./sq. ft. in the new section and an estimated 250 lbs./sq. ft. in the old building. Floor loading in the stereotype department is 250 lbs./sq. ft. and in the mail room of 200 lbs./sq. ft. The presses on the main floor are installed on their own foundation.

Dispatch Room is Important

The second floor also houses a display advertising dispatch room where cuts and mats for ads are assembled for the make-up men in the composing room. Adequate filing space here enhances speedy

Sugar Cane Bagasse For Paper and Board

(By M. S. Kantrowitz, Chairman, Research Committee, Washington (D.C.) Club of Printing House Craftsmen, Inc.)

CONSIDERABLE interest is being manifested, both in Government and commercial circles, in the development of bagasse pulp to be used in whole or in part as a substitute for wood pulp in the manufacture of newsprint and other grades of printing papers.

Bagasse is the fibrous residue of sugar cane after it has been crushed and the sugar extracted. In addition to fibrous material, raw bagasse contains non-fibrous pith cells which, if left in the pulp, make felting and bleaching difficult. This contaminating pith lowers the strength of the finished paper and imparts a very dirty or specky appearance, making bagasse pulp unsuitable for the manufacture of high quality printing papers. The ultimate success in the utilization of bagasse pulp for paper making lies in the development of a method to successfully separate and remove the pith from the cellulosic fibers or to purify it to the extent that would make its removal unnecessary.

There are at present in this country, four proprietary methods for manufacturing bagasse pulp. However, any of the conventional methods of pulp production or modifications thereof can be used in producing bagasse paper, one of which is the Mechano-Chemical Process developed by the Northern Regional Laboratory of the U. S. Dept. of Agriculture.

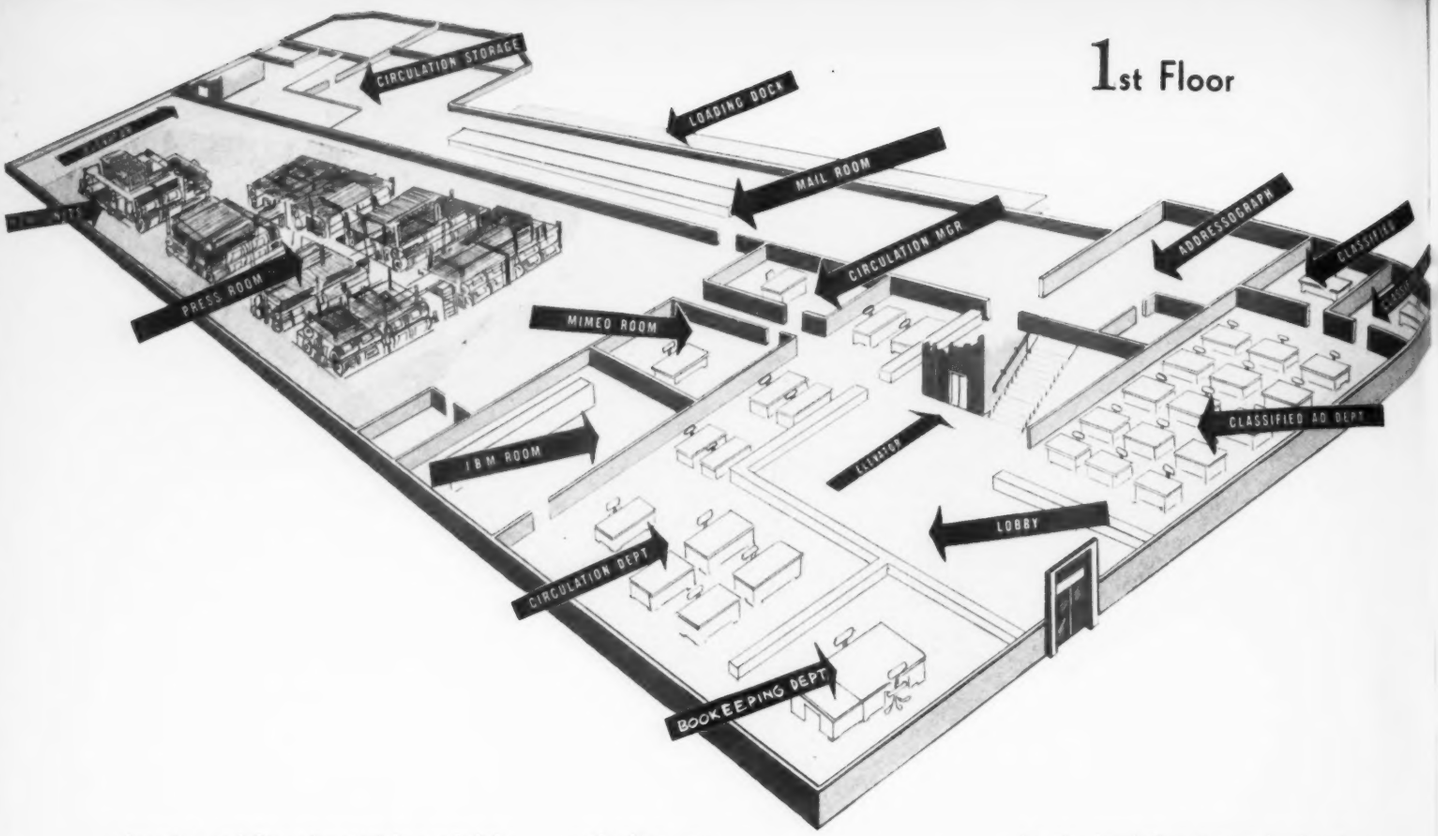
The first mill built for the manufacture of bleached bagasse pulp and paper making was started in 1941 in the Philippines. Limited use of bagasse in pulp and paper making has been reported also from Argentina, Brazil, Columbia, Formosa, India, Mexico and Peru. A paper mill supplying the major newsprint production on the west coast of the United States is now exploring the potentialities of bagasse as a raw material for pulp production.

Newsprint made from 100% bagasse pulp was demonstrated by the Chemical Paper Manufacturing Company of Holyoke, Mass., and the Holyoke *Transcript-Telegram* ran a special edition printed on this paper.

Laboratory tests at the Government Printing Office and the National Bureau of Standards indicate that paper made from 100% bagasse pulp can be produced with sufficient strength, opacity and ink receptivity to make it suitable for printing with standard news ink or a heavier job ink.

Performance tests made at the Government Printing Office in printing a 16 page *Congressional Record* on bagasse paper with a pony flatbed cylinder press indicated that this type of paper offers possibilities for future use.

Dallas Convention Committee Meets—A. R. Tommasini, Chairman, Public Relations Commission, Intl. Assoc. of Printing House Craftsmen, Inc., recently with key members of the Craftsmen's Convention Committee. Shown here with Tommasini (right), from left to right, are: C. M. Gober, Program Chairman; Norton Squires, Publicity Chairman; and Homer L. Green, General Convention Chairman. Discussions were held at the meeting concerning the Intl. Convention to be held in that city September 13-16, 1953.

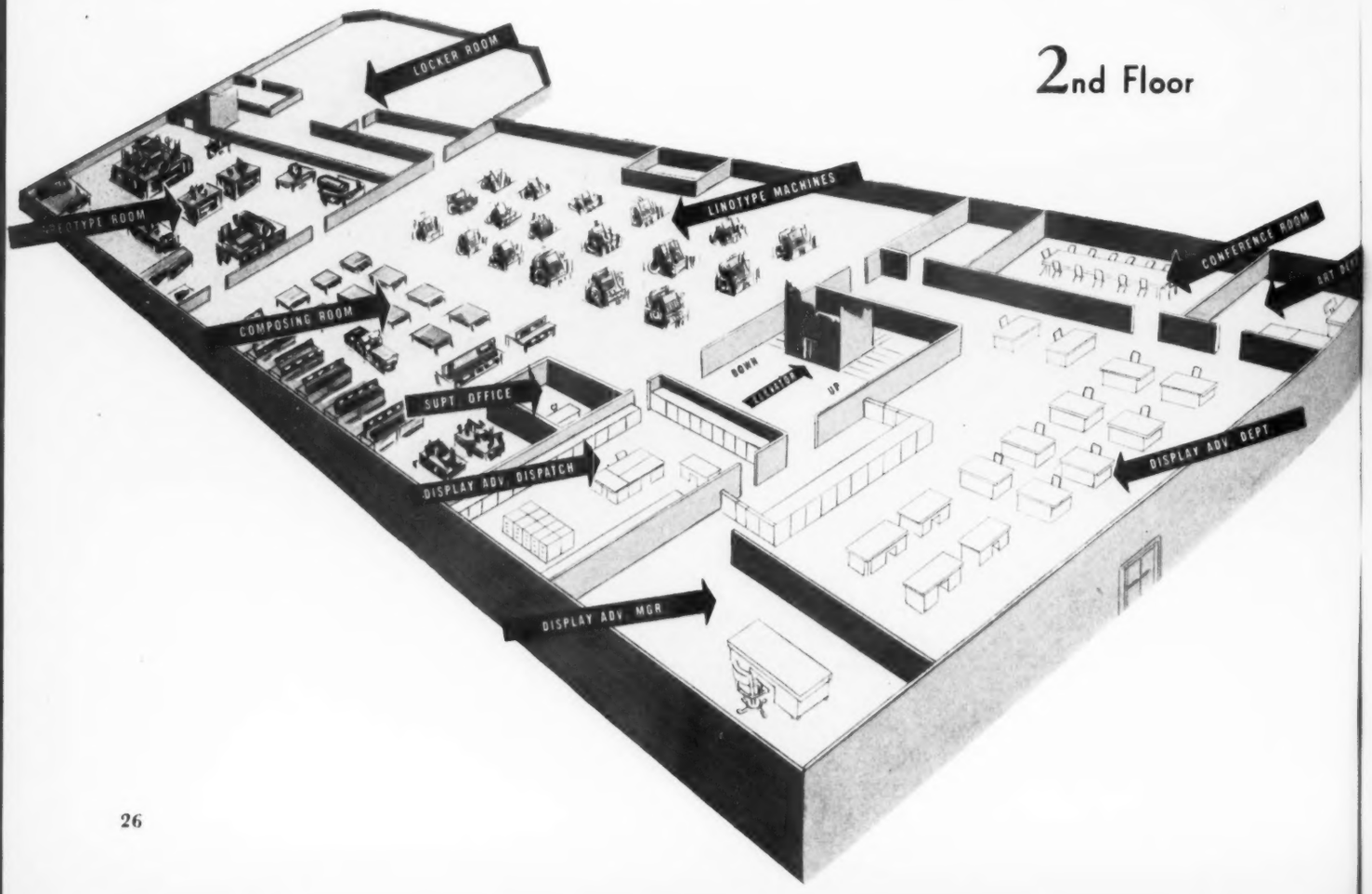


location and flow of materials needed for the ads.

Located adjacent to the composing room is the stereotype department which also came in for its share of modernizing. Among the production equipment used in this department are Wood Autoshavers, Sta-Hi Finaltrim, Kemp immersion melting system, Sta-Hi vacuum casting box, etc.

The third floor accommodates the editorial news room, as well as a number of offices for the different editors. The *Press* has also installed its own photographic studio and laboratories in the enlarged structure. Included in the photo studio equipment is a Fairchild Scan-a-Graver for producing plastic engravings.

An air circulation system in the plant is designed to provide seven complete air changes every hour. It is planned to add cooling units to this system at a later date. Most of the heat furnished the various departments is supplied through air ducts. A minor amount of heat is furnished through fin tube convectors concealed under the windows.



Departmental Views of Grand Rapids (Mich.) *Press*

1.—Executive personnel of the *Press*. Seated, left to right, are: Fred R. Ellis, Classified Advertising Mgr.; M. M. Kesterson, Managing Editor; Earl R. Chapman, Manager; Lee M. Woodruff, Editor; Howard G. MacMillan, Advertising Mgr.; and William J. Raubinger, Circulation Mgr. Standing, left to right, are: Arthur G. Boon, Composing Room Foreman; Donald M. Clark, Stereotype Foreman; LeRoy E. Coates, Pressroom Foreman; Seymour H. Vander Meer, General Advertising Mgr.; Edgar M. Woods, News Editor; John B. Lemmen, Cashier; G. Wallace Mouat, City Editor; and Paul E. Gorski, Mail Room Foreman.

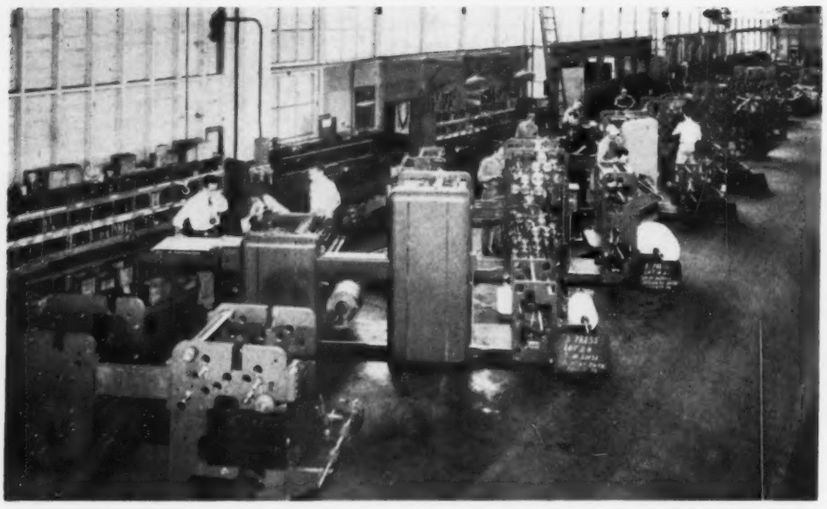
2.—Mailing room showing one of two Wallastar bundle tying machines, Cutler-Hammer conveyor and Jampol feeder table.

3.—Ad alley in the composing room showing arrangement of one Hammond Glider TrimOsaw to every two makeup tables.

4.—View of stereotyping operations.

5.—Dispatch room where ad mats and cuts are assembled and filed.

6.—End view of one of the 16 Scott press units.



View of assembly area for Speed-Flex presses at Western Gear Works' Lynwood, Calif., plant.

Vehicles For Offset Inks

M. S. Kantrowitz, Chairman, Research Committee, Washington (D.C.) Club of Printing House Craftsmen, Inc.

EACH manufacturer of lithographic or offset inks develops his own formulas. The quality of the raw materials are usually about the same in all cases but, due to the variation in the formulas, some manufacturers have been able to develop inks using materials which are not as expensive as those used by other manufacturers.

Originally offset inks were made using linseed oil varnishes as vehicles and some ink makers still make inks of this type. Later, the need for quick drying or so-called "5 min. blacks" came into use and now even these inks are being replaced by the faster drying quick-set inks.

Most offset inks now are manufactured with water resistant varnishes. These may be of the phenolic resin type or the alkyd resin type. Phenolic resin type varnishes are manufactured by dissolving modified oil soluble phenolic resins in a drying oil, such as linseed, by heating. In order to obtain a stable varnish, it has been found necessary to cook the varnish at fairly high temperatures for several hours to combine the resins chemically with the oil. This type of varnish gives water resistance to the inks and helps to overcome emulsification of the ink on the press.

The alkyd type varnishes are manufactured by cooking the alkyd resins in drying oils. Alkyd resins are made by chemically reacting polyphydric alcohols with polybasic acids. Modifiers such as resin, or the fatty acids from vegetable oils, add to the solubility and drying characteristics of these resins. In the newer inks, the manufacturers are incorporating the heat-set principle to give quick drying and are using mineral oil resins and solvents to accomplish this purpose.

As a result of the variation in the types of offset inks, each pressman must learn the best manner in which to use a particular ink and its limitations in use. He relies upon additives to help him when he runs into difficulty with the printing quality of the ink.

Expansion by Dutro and Western Gear

Announcement has been made of a joint expansion program by Western Gear Works and Orville Dutro & Son, Inc., of the printing press designing and manufacturing facilities of the two firms. The program and establishment of a joint Board of Control was announced by B. A. Bannan, Vice Pres. of Western Gear, and Orville Dutro, President of the Dutro company.

Additional engineering and research facilities are being established by the two companies. The Board of Control is headed by Mr. Bannan, L. A. Myhre and Harold Niemeyer of Western Gear, and Mr. Dutro and William R. Puglisi, Dutro Vice Pres. Preliminary designs and engineering will continue to be carried on by Orville Dutro & Son, Inc., under Lyle V. Dutro, Secretary-Treasurer, and Sherman H. Hewson, Chief Engineer.

Bannan also announced that Paul Forsythe has been named Supervisor of Design and Application Engineering at Western Gear's Seattle, Wash., plant. John Morris has been promoted to Supervisor of Design Engineering at the Lynwood, Calif., plant.

The companies' equipment line at present consists of the Models A, B and D Speed-Flex Presses and Model 34 Color-Verter. Other machines are in production including the Model C Speed-Flex Press, a small press designed for specialty shops and for producing limited quantities of snapout carbon jobs. Another press in production is the Model C roll to roll press designed for high speed snapout production. This press is equipped with line hole and filing punches and is constructed to operate in conjunction with a six-part collator. Also under construction is a 26 in. wide double stream roll to roll Speed-Flex press for large manifolding firms.

Views in Mechanical Departments at Oil City (Pa.) *Derrick* and *Blizzard*.

(This picture presentation is supplemental to the article on the Derrick Publishing Co. which appeared in the March 1953 issue of *Printing Equipment Engineer*.)

1.—One of three Comet Linotype machines equipped with Teletypesetter keyboard operating units at the Oil City newspapers. The TTS tape for this machine is connected directly to a wire service automatic tape reperforator. The reperforator is operated directly from AP-TTS newswire service. Local news is cast on the Comets by tape punched in the composing room.

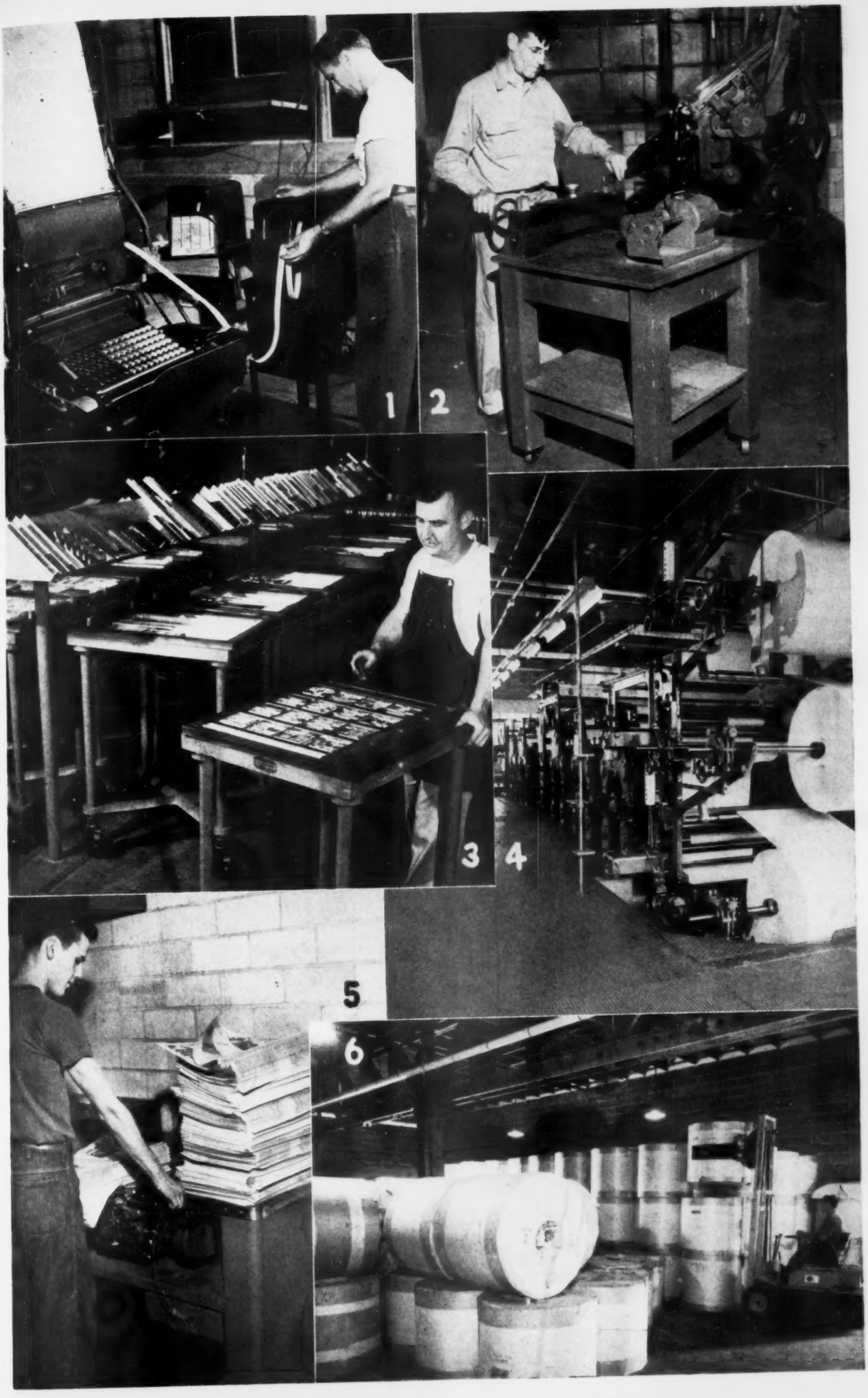
2.—V. E. Coleman, Machinist, is shown here with a specially designed mobile truck which he uses for servicing the Linotype machines. Mounted on the top working table of the truck are a Romyns spaceband cleaning machine and an Ewald pot pump plunger cleaning machine.

3.—View of the material racks used in the newspaper composing room for temperary storage of leads, slugs, cutoff rules, dashes, etc. These low racks are positioned above the page makeup trucks where the material is within handy reach of the makeup men. At the base of the material rack may be seen the steel angle iron strip anchored to the floor which provides a stoping point for positioning the trucks. Fluorescent lights mounted underneath the racks furnish closeup illumination for the makeup men.

4.—The pride of the Derrick Publishing Co.'s two daily newspapers, the *Derrick* and *Blizzard* is this Goss Universal 40 page, two-plate-wide press. Operating speed of the press is 36,000 papers per hr. Control panel for the press is located at the far end of the pressroom. Newsprint rolls are brought in from the storage area on the other side of the wall at the right. Papers are delivered to the mailing room at the left.

5.—Tying newspaper bundles with the Gerrard bench model wire tying machine in the *Derrick* and *Blizzard*'s mailroom. The tied bundles are quickly moved to a loading dock at the end of the room for delivery about the city and outlying areas.

6.—Newsprint roll storage area at the Derrick Publishing Co. The rolls are moved from box cars on the railroad siding and stacked by the electric truck shown here. The storage room is adjacent to a garage where the newsprint may be brought in by truck.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Color for Labels Must Look Alike

A LITHOGRAPHIC color control system, assuring conformance to color standards through the use of high-precision optical instruments, has been developed by American Can Co. As a large producer of lithographed metal cans, stocking over 400 different color inks, which include 90 shades of red alone, such a method of controlling colors enhances the efficiency in Canco's 34 lithographing plants.

An attractive, brightly-colored label on the packer's container often is the key to greater sales of the packaged product. The consuming public is becoming more and more color conscious and in many instances consumers identify a certain product with a color or combination of colors.

When new label designs are created, Canco's enameling and decorating facilities are available to the customer to help in designing and transposing art from the original to the finished offset plate. The color in the new design must be reproduced the same in all parts of the country.

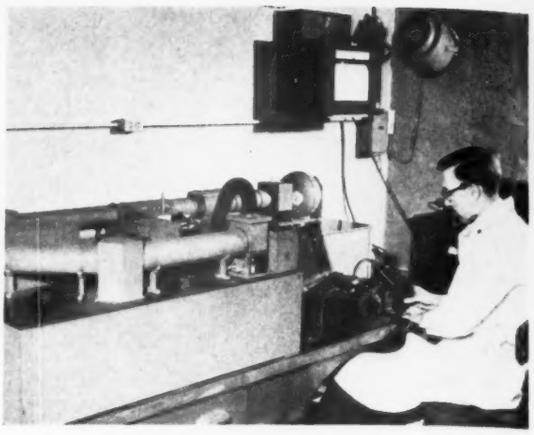
Early attempts at control of label colors were made by storing standard panels which were later used for comparison with current production. The panels, however, faded during storage and thus were not a reliable guide. As a result of a recent laboratory study at Maywood, Ill., new colors on lithographed cans can now be checked instrumentally at the plant, assuring conformance to customer standards. Original research work on color control was done with a recording spectrophotometer. This instrument records the relative reflectance of each color on a label at all wave lengths of light. It automatically produces a reflectance curve by which color or colors in the label may be permanently recorded and compared to other curves obtained on a similar label in the future.

However, because of its complicated mechanism and size, the recording spectrophotometer was not suitable for routine plant operation. Instead, smaller units called reflectometers were decided upon and are now used at several Canco plants for color control work.

Briefly, the method of operation is this. An acceptable range of variation in color lithography is agreed upon by the company's manufacturing and sales departments, and customer, by visual inspection of a number of labels prepared at different plants or at different times in the same plant. These labels are sent to the company's Maywood research department for readings on the reflectometer and spectrophotometer. The spectrophotometer curves are permanently recorded as standards for the correct color.

Maximum and minimum reflectometer readings are established from the laboratory tests and a set of acceptable tolerances recorded. In this way, production runs of a particular label at any plant can be checked on the plant reflectometer using the laboratory tolerance readings as a guide. Samples are submitted by the plant to the laboratory periodically to make sure that the plant's instruments are properly calibrated and maintained.

An important advantage of the color control program is that permanent records of approved colors are made. This measurement of colors both eliminates the human element and facilitates quality control of production, assuring exact colors originally specified or accepted by the can manufacturer's customer.



American Can Co.'s efforts to improve color matching are demonstrated by Paul W. Hardy, chemist at the company's Maywood, Ill. research laboratories. He works with a reflectometer which records the relative reflectance of each color on a label at all wave lengths of light. These $10 thousand instruments are being used at several of Canco's 34 plants.

Dayco's Annual Report

President A. L. Freedlander's annual report for The Dayton Rubber Co. pertains to the fiscal year ending October 31, 1952. The report is excellently prepared, particularly with respect to company products. Net sales amounted to $54,023,245. Cash payments during the year to Class "A" stockholders amounted to $2 per share. On the Common stock, $2 per share was paid. Among the Dayton Rubber products used in the Graphic Arts industry are printing press rollers and blankets, color separators, fountain dividers and V belts.

Printing in Top Ten

THE Intl. Assoc. of Printing House Craftsmen has reported that during the past 50 years the printing and publishing industry in this country has grown three times as fast as the population. It is one of the first of the 20 major groups of manufacturing industries in the United States and on every count it rates among the top ten of these 20. The printing and publishing industry is third in number of establishments; eighth in value added by manufacture; ninth in total number of employees with 715,450 salaried employees and wage earners whose total annual payroll amounts to $2,777,263,000; and eighth among all industrial payrolls in the United States.

Another Craftsmen's Club—The Intl. Assoc. of Printing House Craftsmen has announced the addition of the Santa Monica Bay (Calif.) Craftsmen's Club to International membership. The above photo was taken at the club's first meeting when Intl. President Gordon J. Holmquist (left) presented Santa Monica President Robert Ritterband (right, holding gavel) with its charter. Others on hand for the ceremonies were Dwite Gick, President of the San Gabriel (Calif.) Craftsmen's Club; Lee Farmer, Past Intl. 12th District Representative; and Cyril Stanley, President of the Los Angeles Craftsmen's Club.

Open spread of tabloid size magazine called *Footwear News*, printed by Fairchild Publications, New York, N. Y., with 6 in. strip of colored paper subscription order form inserted automatically in the paper by the press. Aside from the novel mechanical application, Fairchild states this form of subscription blank rings the bell with the reader.

Form Inserted In Magazine By Press

In plant of Fairchild Publications, New York—Narrow band of colored paper 6 in. wide carries subscription form.

A REVOLUTIONARY form of subscription insert for its business newspapers is producing subscriptions for the Fairchild Publications, New York, N. Y., at one-third the cost of the old hand inserted cards, said Edgar W. B. Fairchild, Vice President and Treasurer recently. The new forms were developed at the request of the circulation department which sought a newspaper equivalent of the subscription cards which can be bound in magazines.

After several months of close cooperation among different departments, a method has been developed for printing the subscription order card—better described as a ribbon or band—as part of the press run of the various papers, Mr. Fairchild announced. The papers come off the press with the *New Subscription Order Form* in the position of an extra form. The ribbon is 6 in. deep, is printed on colored stock and runs through the front and back of the paper.

In commenting on the form, Mr. Fairchild explained that color attracts more attention—in two places, instead of one; the ribbon consists of eight subscription blanks instead of one, producing many multiple orders; not being a business reply card, subscriber pays own postage; it can't fall out like loose cards; the ribbon goes into the full run; elimination of hand inserting speeds papers into mails, avoids overtime. The subscription ribbon has passed postoffice regulations as a subscription insert.

The colored ribbon subscription blanks were first used in *Supermarket News*. As a new publication, heavy samplings with subscription cards inserted were necessary. At the same time, it was possible to maintain complete control of all figures. For the first few months of *Supermarket News*, subscription cards were inserted by hand. The colored ribbons were introduced early in June. Three months' tests of each method showed that the ribbon produced new subscriptions at a cost of 78c each, compared with $2.10 each for the hand-inserted cards. The ribbon resulted in 6 per cent more new subscriptions than the card inserts. The cost of paper, printing, additional newspaper postage and labor for inserting are included in these figures.

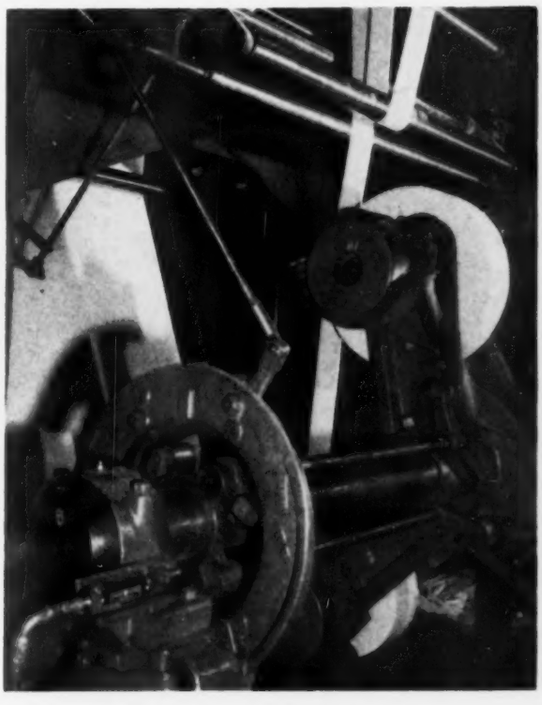
Recently the new colored subscription order blanks have been included in the Fairchild dailies—*Women's Wear Daily*, *Daily News Record*, and *Retailing Daily*.

Development of the subscription order ribbon was due to the cooperation of the various Fairchild divisions involved. While standard Scott press equipment is used, standard newsprint was found to be impractical. Milton Conboy, Purchasing Dept. Mgr., has secured a special paper (0.004 in. thick) in various colors, of sufficient strength and with fast printing qualities. The entire production details were worked out under the direction of Horace Therien, Manager of all mechanical departments. Reel and other adjustments had to be made on the press. Around the Fairchild shop the new project has come to be known as the Therien Ribbon. Mr. Therien also has plans to develop a special reel attachment which would not use up one of the standard reel units on the press.

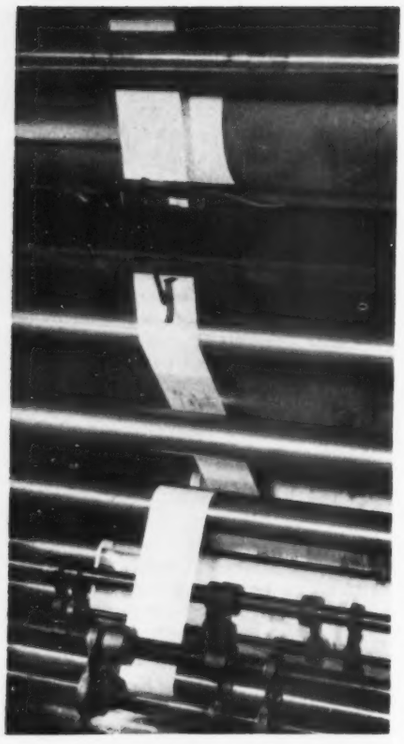
In discussing development of the method for printing the subscription blanks with *Printing Equipment Engineer*, Mechanical Dept. Mgr. Horace Therein said:

"The major obstacle that had to be overcome was to pull the ribbon of paper through the press, that is, through the trolleys, over the press former, nips and folder without throwing out the normal press setting by causing too much folder squeeze in one spot.

"In its initial run," he continued, "we figured that we should drop the position of the type form to be stereotyped about ⅔ in. from the normal top of the page and simply blank out the bottom of the plate. In this way we could keep the sheet itself away from the trolleys or propellers, as they are sometimes called. We also eliminated the nips as the ribbon



This illustration shows how the special colored 6 in. wide paper for subscription inserts is mounted on Scott press in plant of Fairchild Publications, New York, N. Y. The two rolls are mounted on standard reel arms. Plant Mechanical Dept. Mgr. Horace Therien plans to develop a special reel attachment which will not use up one of the standard reel units on the press during a run.



The Therien Ribbon travels smoothly through this newspaper press. Note the web break detector. Special colored paper 0.004 in. thick is used for the subscription insert.

passes over the former. This ribbon is wholly controlled by the collector pins and friction pull and aside from threading it through the press, causes no more trouble than any other sheet.

"It is remarkable how true it runs when you consider it is not guided in any way. Tension is held fairly tight as this paper is made with very good tensile strength and rarely gives us trouble. We have run this ribbon between sheets and as a bottom sheet and it runs equally well in both positions."

Automatic Stereotype Plate Loader

IN THE building of Peoria (Ill.) Newspapers, Inc., stereotype plates are transported to and from the stereotype department on the second floor and the pressroom on ground floor level. This is done by means of Pantone Engineering & Mfg. Co.'s stereotype plate loader. The loader is an electro-mechanical device for receiving and storing stereotype plates in a dumb waiter type elevator car. At the proper times, the loader discharges the plates automatically.

In the loader can be received and stored up to six plates from the stereotype department for discharge in the pressroom. Or the loader will accommodate and store plates in the pressroom position and discharge them in the stereotype department. These are reverse operations and necessarily must be determined by a hand operated selector switch. All sequences of plate motion are initiated or terminated by the position of the plate.

The horizontal motion of the plate is controlled by the Plate Feeder and the Horizontal Drive. The vertical motion of the plate for the purpose of storage, is controlled by the Vertical Drive. The up or down motion of the elevator car is determined by the position of the Operation Selector Switch and whether the car is empty or loaded.

The horizontal motion of the plate within the car is accomplished with a motor driven V belt riding over two large sheaves. The weight of the plate in motion is carried by these sheaves, which also apply the horizontal propulsion force. On entering the car the plate balance is maintained by two ball bearing rollers. The center of travel of the plate inside the car is maintained by six rubber tired ball-bearing wheels.

The vertical motion of the plate is accomplished with four roller chains being driven by a brake mounted gearhead motor. The roller chains have rubber surfaced lifting lugs attached. The lugs and chain are so placed that the plate will be lifted and held at four points.

A plate starts its motion into the car when the Plate Feeder releases it. The feeder will release a plate for loading and storing when the empty car is in position to receive them or after the previously released plate has been raised. (In Figs. 1 and 2 the Plate Feeder is shown in plate release position. The Loader has raised the two plates for storage and is ready to receive another one.) The Feeder will continue to release plates one at a time and hold back succeeding plates until there are six of them in the Loader. At this time the car will leave the loading level and go to the discharge level. At this level the Loader will discharge the plates one at a time and continuously. When the car is empty it will return to the loading level.

Limit switches are used to establish the position of the car at the Pressroom and Stereo Dept. levels. Limit switches are also used to determine the position of the plate in horizontal and vertical motion. In order to have the correct sequence of operation several circuits are required of each limit switch. For this purpose relays are used.

In operation, the first series of circuits are set up with the hand operated selector switch. This is to establish whether plates are to be delivered to the Pressroom or to return them to the Stereo Dept. The next series of circuits are made by the position of the car. The final circuits are determined by the position of the plate. To control the motion of the car in correct sequence and at the proper time, nine relays are involved. This provides that the car will remain at the loading level until fully loaded. Manual depression of the *Up* or *Down* elevator pushbutton, as the situation requires, will permit the car to leave the loading level. This is desirable in the instance that it is necessary to deliver less than a full load of plates. Circuits are provided so that the car can not be moved while the plates are in horizontal motion. This is to preclude the possibility of an accident when the *Up* or *Down* pushbutton is depressed while a plate is entering or being discharged from the car.

PIA Dates Changed

General Mgr. James R. Brackett of the Printing Industry of America, has announced that the forthcoming PIA convention will be held at the Shoreham Hotel, Washington, D. C., October 5 to 8 inclusive. Original dates were November 16 to 19. Please note change of dates and be governed accordingly.

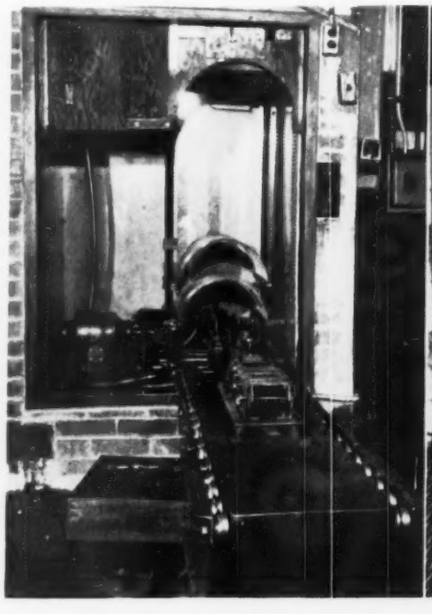


Fig. 1—Pantone stereotype plate loader in plant of Peoria (Ill.) Newspapers, Inc., showing plates loaded in stereotype department for transport to pressroom.

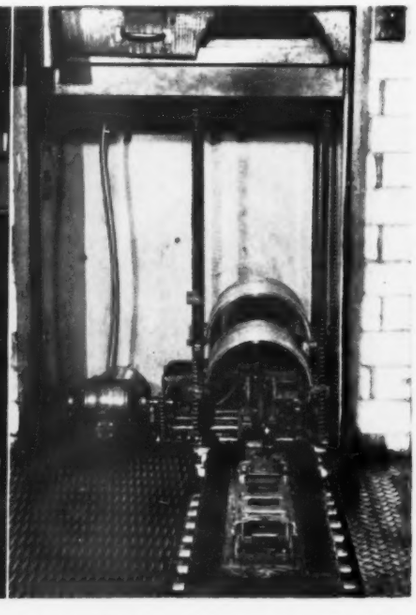


Fig. 2.—Here the Pantone stereotype plate loader has been lowered to the pressroom. The plates are in position to be unloaded. Capacity is six plates.

R.O.P. Color Committee

Expanded representation from the American Newspaper Publishers Assoc. has been made on the Subcommittee on R.O.P. Color set up jointly with the American Assoc. of Advertising Agencies. The subcommittee for the ANPA is as follows: James H. Armistead, Nashville (Tenn.) *Tennessean* and *Banner*; Amon G. Carter, jr., Fort Worth (Tex.) *Star-Telegram*; Julian J. Eberle, Cox Newspapers, Miami, Fla.; Earl J. Gaines, Pittsburgh (Pa.) *Press*; Henry Garland, Pittsburgh (Pa.) *Post-Gazette*; Joseph E. McMullen, Milwaukee (Wis.) *Journal*; Henry Messina, Los Angeles *Herald* and *Express*; Fred Shafer, Chicago *Tribune*; Herbert T. Stanger, Boston *Christian Science Monitor*; and A. Henry Tolley, Philadelphia *Inquirer*. For the AAAA: George B. Dearnley, McCann-Erickson, Inc., New York, N. Y.; Ernest Donohue, Batten, Barton, Durstine & Osborn, Inc., New York, N. Y.; Eli Gordon, J. Walter Thompson Co., New York, N. Y.; Erwin Miessler, Needham, Louis & Brorby, Inc., Chicago; John F. Aldinger, Young & Rubicam, Inc., New York, N. Y.

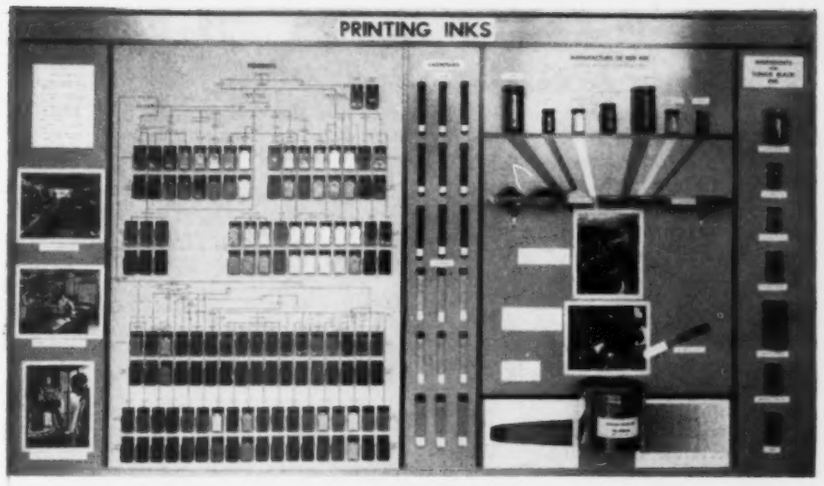
Education Council Expands

Expansion and broadening of the membership of the Education Council of the Graphic Arts Industry has been started under the chairmanship of James J. Rudisill, President, Rudisill and Co., Lancaster, Pa. Printing plants have been invited to become members of the Education Council. According to Rudisill: "The Education Council has been formed for the purpose of coordinating the educational activities of Graphic Arts industry groups, as well as to render advisory services and to aid and encourage the development of an educational system which will serve the best interests of the Graphic Arts industry."

The Council is now engaged in 12 projects. New members are being added to the different committees from printing plants, schools, and Graphic Arts trade groups. The first publication of the Education Council, *Safety Manual of the Graphic Arts Industry*, will be released early in May. Work has been started on a Training Guide and an Instructor's Guide to make the manual more useful in local companies and in group safety classes. Miss Lillian Stemp is author of the safety manual.

Large Equipment Order Probably is Record

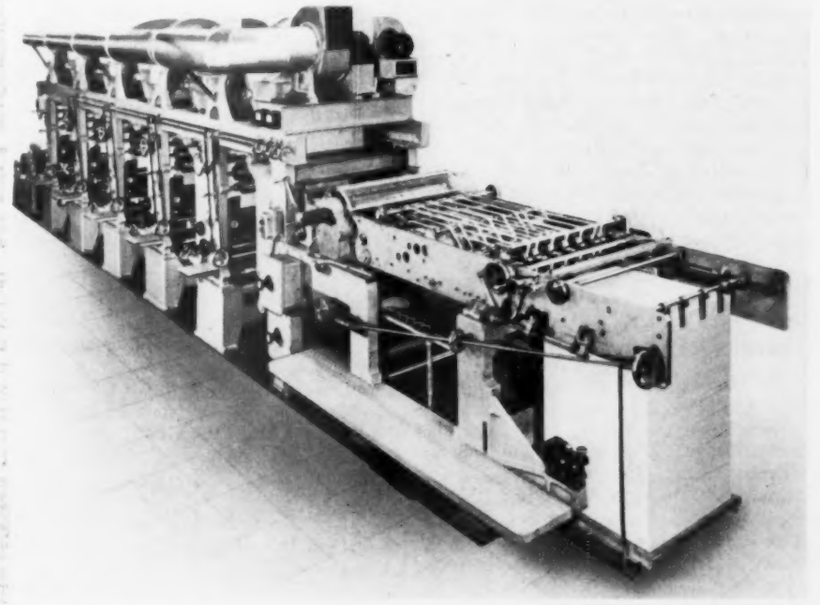
What is said to be the largest single order for newspaper presses has been placed by the Philadelphia *Bulletin* with R. Hoe & Co. To complete the order, consisting of 63 press units and 12 folders, about a year will be required. The presses will be set up in the new plant at 30th and Market Sts., which the *Bulletin* will erect. Another equipment order forming a part of the expansion program was placed with Intertype Corporation for 38 machines reportedly costing between $400 thousand and $500 thousand.



NAPIM Ink Exhibit—Installation of a printing ink display, presented by the National Assoc. of Printing Ink Makers to the Pressmen's Home, Tenn., headquarters of the Intl. Printing Pressmen's and Assistant's Union, was completed recently. The 6 ft. by 12 ft. three-panel exhibit shows actual samples of colors used in printing inks, how they are derived from basic raw materials, and how the colors are combined with varnishes, driers and compounds to make the finished inks. Preliminary work on the display was done at Conde Nast Press under the direction of Joseph Chanko, Plant Mgr. The raw materials that went into the exhibit were assembled by the NAPIM Technical Committee. Members of the Committee are: Chairman, Frank Cray, Interchemical Corp., Printing Ink Div.; George Cramer, Sinclair & Valentine Co.; G. L. Erikson, Braden-Sutphin Ink Co.; Nat Rosen, Superior Printing Ink Co.; and T. Rosevelt, Sun Chemical Corp.

Interchemical Report

In Interchemical Corporation's annual report for 1952, President H. B. Woodman states: "Our volume of sales in 1952 was approximately the same as in 1951—$88,188,000. After payment of the regular dividends on the 4½% cumulative preferred shares, the net profit applicable to each common share was $2.93. Federal income and excess profits taxes applicable to each common share amounted to $6.70 in 1952.



5-Color Label Press—The Klingrose Div., American Type Founders recently completed the first of several five-color rotogravure presses for shipment to France to be used in printing labels. Designed to accommodate a 32 in. wide web, the press is equipped with a high speed rotary sheeter and stream delivery claimed to handle 15,000 sheets per hr. The delivery mechanism also includs a built-in rewind station. Power equipment consists of a Reliance VSS Electronic a.c.-d.c. press drive. ATF states web tension remains constant whether impression pressure is on or off. Another feature is the single station control of running register at the delivery end by means of a coaxial device which permis separate or simultaneous adjustment at each of four printing stations. The cutter is driven by a 360 deg. running register planetary gear box for cutting in register with the printed web.

Western Plant Reports Growth

WITH the installation of a new 41 in. by 54 in. Harris two-color offset press, Central Lithograph Co. of Los Angeles, Calif., has grown in nearly eight years to where it is now producing 4 million impressions per month. Central operates a total of five 41 in. by 54 in. Harris presses with its recent addition.

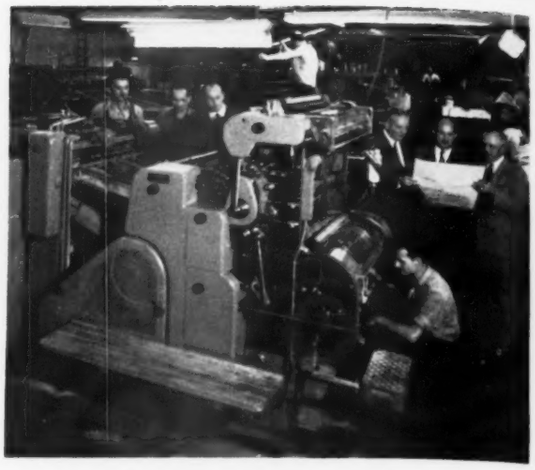
The West Coast offset firm operates a platemaking department and pressroom. Though a large volume of the production is color work for publications, booklets, advertising pieces, etc., Central's specialty is printing on cardboard and envelopes. The organization is proud of the job done in four-colors on a 36 in. by 52 in. sheet of gummed stock.

Central Lithograph was established in April 1945, by its owner and manager Charles Nagelberg. Starting with five employees and 4000 sq. ft. of floor space, it grew to its present size of 17 employees and more than 10,000 sq. ft. of floor space. Foreseeing the need for larger multi-color equipment, Nagelberg purchased a single color and a two-color press in 1949.

The plant works on a two-shift basis with 75 per cent of workers being employed in the pressroom. The platemaking department is completely equipped while bindery operations are performed in outside plants. Twenty-five per cent of Central's orders are received from points outside of Los Angeles.

Besides Mr. Nagelberg, who is commonly found working at different jobs in the plant, other plant executive personnel include: Bert Joseph, Lithographic Consultant and who has charge of sales; Miles Jackson, Plant Foreman; and Stanley Spencer, who is in charge of the platemaking department.

According to Nagelberg, even greater expansion is planned. He said that three of its largest accounts have doubled their monthly orders on the strength of the recent equipment installation.



Recently installed in the plant of the Central Lithograph Co., Los Angeles, Calif., is the Miehle No. 29 offset press shown in the foreground. Second from right is Charles Nagelberg, owner of the firm, examining a press sheet.

Printing Plates Research Continues Research Work

New trustees, officers, and appointments for 1953 have been announced by Printing Plates Research, Inc. At the annual meeting the following trustees were elected: Dennis Hoynes, Central Electrotype Co., Cleveland; Raymond Kreber, The Van Bolt-Kreber Electrotype Co., Columbus, O.; C. H. McNellen, Bomac Electrotype Co., Ltd., Toronto, Can.; Lloyd Partridge, The Partridge and Anderson Co., Chicago; Joseph Schwartz, Westcott and Thomson, Inc., Philadelphia; Howard Schwarz, The Art Electrotype Co., Cleveland; and George C. Scott, New England Electrotype Co., Inc., Boston.

The trustees subsequently elected Joseph Schwartz as President, Dennis Hoynes as First Vice Pres., Lloyd Partridge as Second Vice Pres., and Raymond Kreber as Secretary-Treasurer.

President Schwartz appointed a Development Committee, consisting of Howard Schwarz, Chairman, Dennis Hoynes, and Lloyd Partridge. J. Homer Winkler, Battelle Institute, Columbus, O., was appointed manager. Work at Battelle on developing improved methods for the manufacture of electrotypes was extended for another year.

Flint's Tulsa Plant

Howard Flint Ink Co. has opened an ink manufacturing plant in Tulsa, Okla. located at 831 N. Lewis Pl., according to Robert H. Flint, Vice Pres. of the firm.

Ernest M. Van Strien has been named Manager of the Tulsa plant of Howard Flint Ink Co. He was formerly connected with the firm's Houston plant.

The Tulsa plant will produce commercial printing ink and serve as a distribution center of newspaper ink, Flint said. It will serve plants in Oklahoma, southern Kansas, southeast Missouri, and western Arkansas. The plant will be equipped with three 10,000 gal. tanks for newspaper ink storage. A 2000 gal. capacity tank truck will be used for deliveries to newspapers.

Intertype Report

Consolidated net income of the Intertype Corporation amounted to $704,233 in 1952 on sales of $10,524,290, Neal Dow Becker, Board Chairman, and Harry G. Willnus, President, stated in the company's annual report. This is equal to $3.11 a share as compared to $3.89 a share in 1951 after adjustment for a 2½% stock dividend distributed on Dec. 15, 1952. Although Intertype's major source of income will be the hot metal typesetting machine for many years, continued progress in the manufacturing and marketing of the Fotosetter was reported.

Newspaper Changes Name

The Chicago *Herald-American* has announced a change in the name of the newspaper to the Chicago *American*. According to Worth C. Coutney, Publisher, the change was made because new name is shorter and more convenient to write and it symbolizes the change in general appearance and editorial treatment of the newspaper.

Battelle Info Service

A technological information service has been established at Battelle Institute, Columbus, O., aimed at assisting industry in providing sources of existing published information. According to Battelle Director Clyde Williams, the service will be tailored to meet individual needs. It will include the preparation of bibliographies, and coding and classification systems.

David M. Rapport, President of Rapid Roller Co., died on April 14 in Los Angeles. Mr. Rapport achieved a leading position in the Graphic Arts industry despite a humble start in life. Reared in an orphans' home until he was 14, he began his business career as a newsboy and later as an apprentice for a printing machinery manufacturer. He is credited with the invention in 1913 of the first offset roller which did away with the use of sheepskin and leather. In 1917, Mr. Rapport organized the Rapid Roller Co. and in 1932 he was instrumental in the development of the offset press blanket. He was a member of the Chicago Craftmen's Club, Lithographic Club of Chicago, Printers' Supplymen's Guild and other associations. Surviving are his widow, Freda, a son, Lawrence S. Rapport, and a daughter, Maxine Sherwin.

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You can main keyboard BIGGER TYPE with Wide Range LINOTYPE Mixers than with any other machine!

Only LINOTYPE'S Model 35 Mixer gives you such a range of type—the smallest to the biggest faces available from any main keyboard. Its 35% wider main magazines give you full fonts of normal faces to 36 point, condensed to 48 point. And with its auxiliary magazines the Model 36 expands this already wide range up to 60 point condensed!

Other Linotype Exclusives

One-Turn Shift—the world's fastest magazine shift—with no extra motors and mechanisms to buy and maintain.

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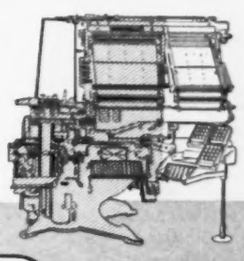


• LINOTYPE •

Equipment Reports

(**Continued from Page 17**)

color proofing. F. E. Reilly, President of Lake Shore, states the booklet is the result of several years of research in cooperation with newspapers, engraving plants and ad agencies. Some of the standards suggested by Lake Shore for engravings pertain to gauge and type of metal, page size printing area, etching depth, shoulders, marking dead metal, location of register marks, routing, hard egdes, etc. Tables relating to recommendations on materials to be sent to newspapers for the production of full and less than full page ads are also included. Copies of this booklet are available by mentioning PEE No. 604 in your request.

Hand Cleanser

A HAND cleanser claimed to remove all kinds of printing inks, oil, grease, paint and carbon black, has been reported by the Merritt Products Co. Called Printer's Friend, the cream form cleanser is described as white in appearance, mildly scented and will not separate in storage. Sponsor states the cleanser is an aid to chapped and rough hands. It is available in quart and gallon containers. Please mention PEE No. 599 when requesting further information.

Truck Manual

DESCRIPTIONS and illustrations of platform and fork trucks and floor cranes are among the contents of a 12 page manual available from Elwell-Parker Electric Co. One section of the manual is devoted to the Elwell-Parker motor, the Rolotac Controller, and includes data on design. Individual subjects covered under the part on high lift trucks are the drive unit, trail axle, frame, controls, steering and the hoist unit. Other sections include information on the low lift trucks, fork trucks and floor cranes. Attachments designed for use with these trucks is also shown. Copies of the manual may be obtained by requesting PEE No. 561.

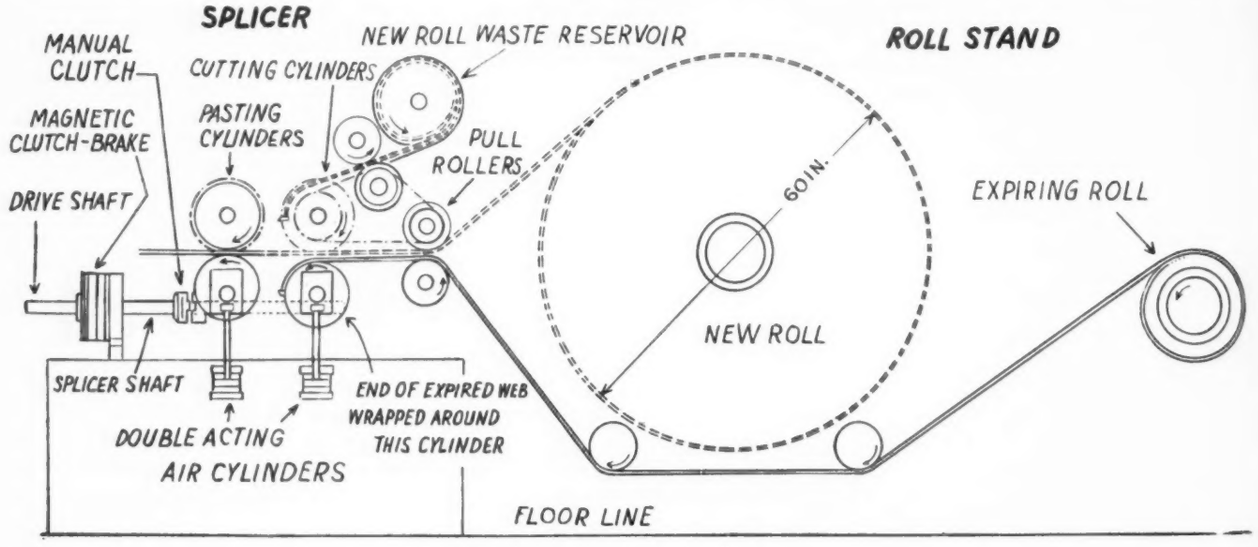
Electric Dehumidifier

A HEAVY duty electric dehumidifier designed for application in printing plants has been announced by the Air Conditioning Div., Remington Corp. Called the Moisture Magnet, the self-contained unit automatically removes excess water or moisture from the air of enclosed spaces.

The unit is plugged into an electrical outlet for installation. For drainage, the unit may be placed over an existing floor drain or pails may be used for water collection. Available in two capacities, Remington Moisture Magnets are recommended for operation at room temperatures of 60 to 110 deg. F. and relative humidities of 40 to 100 per cent and may be used singly or in multiple units.

The two models are equipped with either a 1 or 1½ h.p. compressor. Units are available for 208 or 230 v., 50 or 60 cy., single or 3-phase current, and for 230 v., d.c. The dehumidifier is enclosed in a welded steel cabinet measuring 37¼

(*Continued on Page 54*)



Champlain Butt Splicer—The Champlain Co., Inc., announces a high speed Butt Splicer for use with roll-fed equipment. Splicing takes place as the web travels horizontally through the splicer at speeds up to 300 f.p.m.

Installed between double-roll stand and printing, processing or converting machinery, pressure-sensitive tape is used by the splicer to join leading and trailing edges of new and old rolls of stock. The leading edge of the new web is butted firmly against the edge of the outgoing web to form an exact splice. There is no gap to weaken the splice and no overlap that would disturb press makeready.

The splicer is in action only during splicing operations. Between times, all splicer rollers and cylinders are disengaged, allowing the web to pass through the splicer on its way to printing, processing or converting equipment. Simultaneously, a new roll is being readied for the next splice. The new web is threaded horizontally between two vertically mounted pull rollers, between two vertically mounted cutter cylinders, partially around the upper cutter-cylinder, up between a second pair of pull rollers and into a waste reservoir. The old web travels directly beneath the new web but continues horizontally past the cutter cylinders, between two vertically mounted paste cylinders and on into the production machine feeder mechanisms.

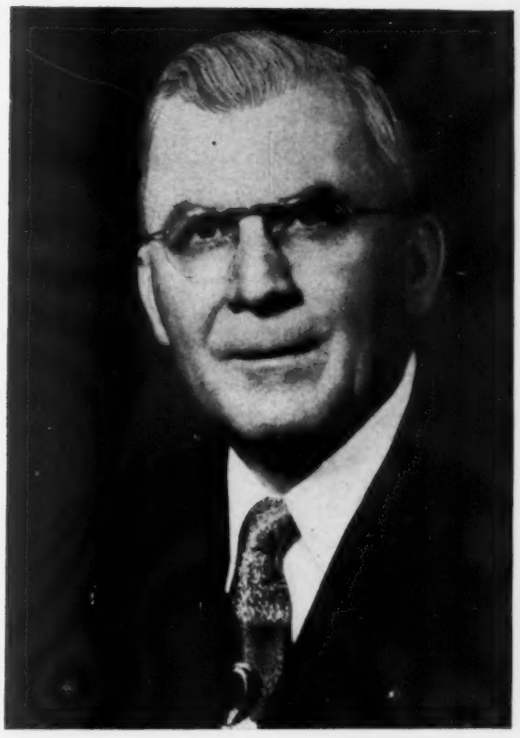
As the old roll runs out, the On button is pushed and the pull rollers engage and begin to unwind the new roll. At the proper time (when the speeds of the webs become synchronized and as the end of the old web approaches), the Splice button is pushed and the cutter and paste-cylinders operate. The cutter cylinders make one revolution and cut through both webs, cutting off the trailing and leading ends of the old and new rolls, respectively to butt the webs.

The severed section of the new roll accumulates in the waste reservoir for disposal while the remainder of the old roll is wrapped around the lower cutter cylinder (previously fitted with an adhesive strip) for subsequent removal. The butted webs travel between the paste cylinders and are adhered prior to reaching production equipment. After this step the splicer is shut off automatically. Less than 10 ft. of web travel is required to synchronize the speed of the new web with that of the outgoing web at a speed of 300 f.p.m.

The splicer is driven from the main shaft of the production equipment. A magnetic clutch brake connects the main shaft with the splicer shaft when the On button is pushed and disconnects it when the splice is complete. A manual clutch is installed for safety. A safety Stop button also is provided.

For additional information please mention PEE No. 572 in your request.

Publisher tells how Wisconsin Weekly Solves Problems with TELETYPESETTER



Mr. T. C. Radde, publisher, Sparta (Wis.) Herald

Never considered automatic typecasting for your weekly? Then read what T. C. Radde, publisher of the Sparta (Wis.) Herald has to say about his paper's experience with Teletypesetter.

"We installed Teletypesetter five years ago, and have found it a great help. We wouldn't be without it because it has done, and still is doing a great job for us," Mr. Radde declared.

"Before we installed the machine we had a heck of a time getting our type set and we used to have an operator work three nights a week. Since we have installed the TTS, we no longer have the difficulty because the machine will knock out 16 to 20 galleys of news type in an eight hour day—and will do it with a minimum of errors, maybe five or six to the galley," the Wisconsin publisher said.

"The machine keeps the composing machine running full speed just as long as there is tape." Mr. Radde added, "We have found that anyone can operate it. In fact, all the operator of the typesetter has to do is put in the tape and let 'er go. I would say that in an eight hour day, it will take about an hour of someone's time for emptying the galley, fixing distributor stops and making minor adjustments."

"We have trained two girls on the perforator unit. The one we have at the present time thinks nothing of batting out 500 lines an hour and does it with very few errors.

"Knowing what I do today about operating one of these units, I would buy another if we could use it. The TTS, in my opinion, is the answer to the problem of setting a lot of type—even in a small weekly such as ours with 4,351 circulation," said Mr. Radde.

Want to know more about how Teletypesetter can help cure your type production headaches? Just fill in the coupon below.

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Gentlemen: I'd like to know how Teletypesetter can help me turn out more type in less time. I'm interested in newspaper composition_____ commercial composition_____

Name _____ **Title**_____

Company_____

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City_____ **Zone**_____ **State**_____

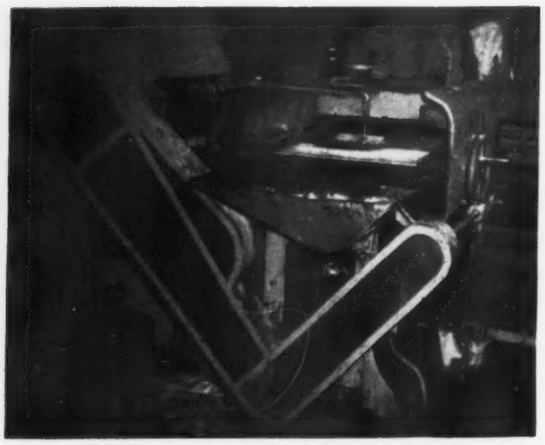


Plate Rougher Converted into Cast Scrubber — Some years ago Kingsport Press, Kingsport, Tenn., had on hand an old model Ostrander-Seymour plate rougher. The cast (backed-up shell) scrubbing operation was being done manually. Then a way was found to convert the plate rougher into a scrubber. This conversion saved time. It also eliminated the unpleasant aspects of personal contact with the cleaning fluids in scrubbing the plates. The cast is placed on the movable bed which advances to a point under a pipe. Solvent is pumped over the cast through this pipe from a 15 ga. capacity tank underneath the rougher bed. A brush attached to the machine in place of the original cutting knife scrubs the cast as it moves along. The stroke of the machine moves the brush back and forth over the cast. Excess solvent flows off into a trough equipped with a strainer. Steel stops and an automatic trip keep the casts from falling off the table and permit automatic operation of the machine. Splash shields at the sides of the bed confine the solvent to the bed itself. The machine retains the same stroke and bed movement when used for rough cutting electrotype plates.

Air Conditioning in Specialty Firm

By F. M. JOHNSON*

**Manager, Air Conditioning Div., Surface Combustion Corp., Toledo, O.*

SINCE its inception in 1923, Shellmar Products Corp., Mount Vernon, O., has been engaged in producing protective bags, envelopes, pouches and wrappers for the food industry. Production of protective wrappers, generally made from light gauge metal foil or transparent film or laminations of both, is not as simple a problem as at first it might seem. Paramount purpose of these enclosures deals with moisture prevention or retention. Quite often, these bags must also be greaseproof and lightproof.

Acetate Printing Problems

One of the difficult problems to overcome in preparation of protective packages for foodstuff enclosure was that of printing on the material. A neat, colorful, in-register, printing job is necessary if the packaged product is to make an attractive, eye-catching appearance. To imprint multiple colors successfully on temperamental materials was a headache of no little consequence.

The printing process is subject to similar humidity problems which affect those foodstuffs for which Shellmar produces moisture-proof wrappers. Chemical solutions lose their concentration, and gelatin coatings do not adequately dry under excessive humidity conditions. Because of this, it was necessary for Shellmar to air condition its cylinder engraving production rooms in order to properly control both temperature and humidity in these operating spaces. Shellmar now also has its research and testing laboratory so equipped as to enable its technicians to duplicate any reasonable combination of air temperature and humidity.

Fifteen years ago, the company installed Kathabar humidity conditioning equipment, manufactured by Surface Combustion Corp., to attain the desired air conditioning results in its cylinder engraving production rooms. Today, this chemical liquid, absorbent-type air conditioning system, now modernized, supplies a total of approx. 50,000 c.f.m. of air at normal comfort level conditions to these spaces to prevent loss of chemical solution concentration and delay in drying of gelatin coatings.

A second Kathabar humidity conditioning system was put into operation at Shellmar in 1946 to provide not only for the research and testing laboratory requirements, but also to supply the administrative offices with a summer-time atmosphere of 78 deg. F. and 45 percent relative humidity air conditions.

The air conditioning system at Shellmar provides properly-balanced temperature and humidity conditions. Chill, shock or clamminess resulting on hot summer days when one passes from or into air conditioned spaces are not noticeable. In addition, since the humidity conditioning equipment absorbs moisture from the air prior to its being cooled to the proper delivery temperature, the cooling coils in the system do not condense out any excess water. This results in dry coils over which the air passes just prior to delivery. Wet cooling coils provide troublesome maintenance problems, since they are natural dirt collectors, and allow distribution of any bacteria.

Operation of System

In the original Kathabar system, that installed in the process engraving rooms, 17,500 c.f.m. of air is mixed with recirculated air from the spaces to provide the 50,000 c.f.m. air total distributed. This fresh air, at maximum design conditions of 95 deg. F. and 48 per cent R. H., passes over cooling coils in the air washer, contacting a spray of the chemical absorbing solution. The absorbent, consisting principally of a lithium chloride solution base, removes 2460 gal. of water per day from the air under maximum operating conditions.

The cooling coils serve a two-fold purpose: to cool the absorbing solution and the air. The colder the absorbent, the more moisture it is capable of retaining. In this installation, 160 g.p.m. of 65 deg. F. water recirculated from the aftercooling coils is passed through the Kathabar coils.

After completing the dehumidifying pass, a small amount of the absorbent is reconditioned in a separate regenerator unit. Here the solution is again sprayed, this time over low-pressure steam tubes. Excess moisture held by the absorbent is driven-off and exhausted to the atmosphere by a scavenging air stream. Then the solution is returned to the air washer for dehumidification purposes. A total of 2140 lb./hr. of 25 p.s.i.g. steam is supplied to the regenerator under maximum conditions.

Auxiliary Equipment

For the several process engraving spaces concerned, separate aftercooling and afterheating coils are employed to bring the air to the specific temperature required. Available well water at 55 deg. F. is used for the cooling coils. During winter operation, a preheating coil utilizes 1430 lb./hr. of 5 p.s.i.g. steam to warm the fresh air from minimum design conditions of -10 deg. F.

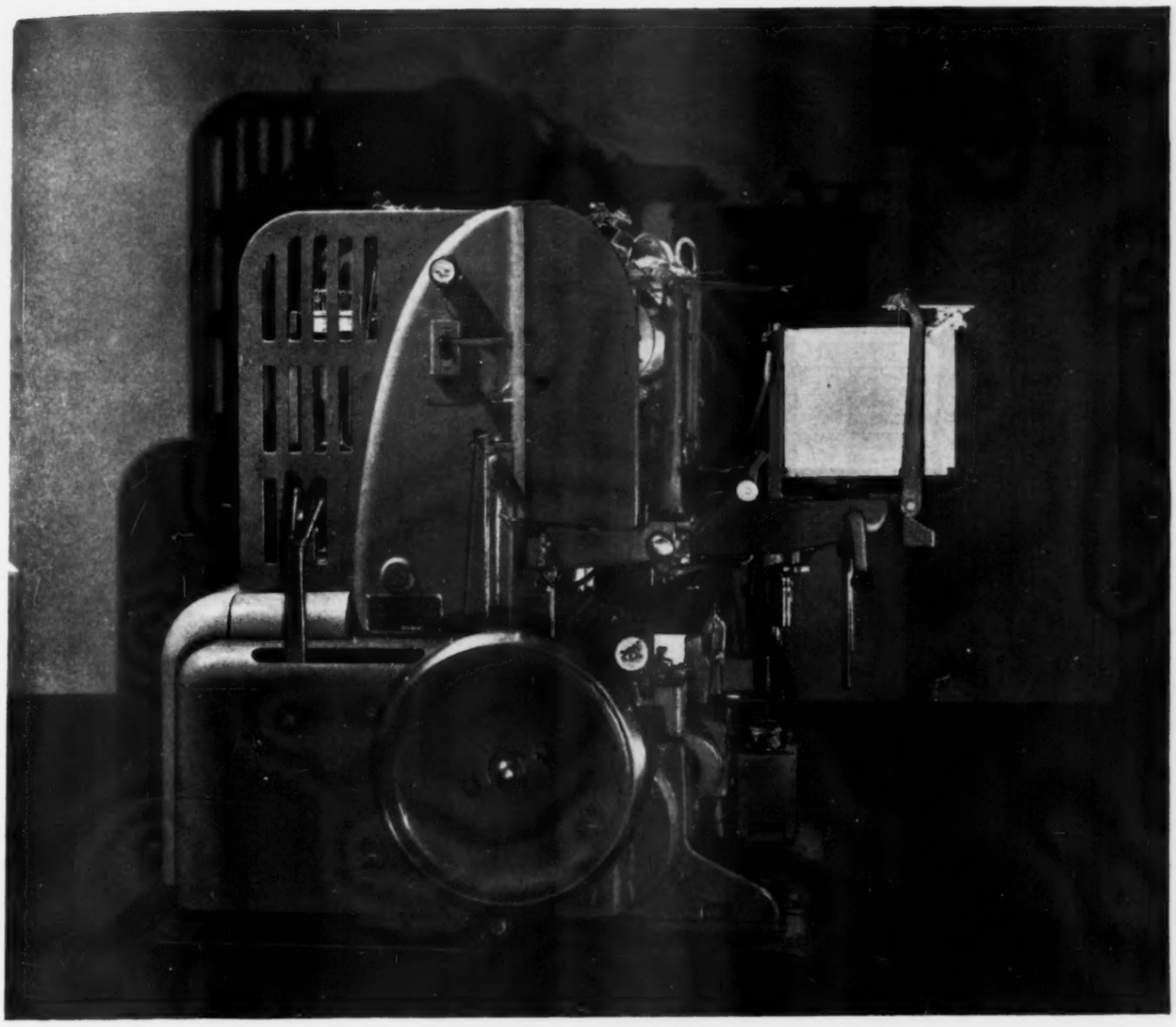
One of the process rooms requires a considerably lower humidity than do the others. To accomplish this, a separate 3500 c.f.m. air capacity package unit, combining the air washer and regenerator chambers on one base, is set in this room's air conditioning line, removing a maximum of 88 gal. of water from the air per day.

Paper Firms Join

J. O. Bulkley and William N. Stetson, jr., have announced that the business of Storrs & Bement Co. and the Paper House of New England has been purchased by Carter, Rice and Company Corp., an affiliate of Bulkley, Dunton & Company, New York.

Organizes Export Firm

Stanley Ross has organized and has been elected President of Stanley Ross & Co., Ltd., with offices at 500 Fifth Ave., New York, N. Y. The firm will specialize in the sale of Graphic Arts equipment for export to countries throughout the world.



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the big moneymaker on short runs

Letterheads and forms, announcements and flyers, circulars and broadsides, booklets and catalogs—a great variety of work goes through the average printing plant. The vast majority of all orders call for short runs. Saving time between jobs is of vital importance.

With this press you can turn out more of those small jobs every day because changeover time has been reduced to a minimum. The Miehle V-50 Vertical has the versatility to handle all short runs, from handbills to process color, and to give top production on long runs.

Send for the full story on the V-50 Vertical

sheet size 14 x 20 • speed up to 5000

MIEHLE PRINTING PRESS AND MANUFACTURING COMPANY

Chicago 8, Illinois

Western Div. (S.N.P.A.) Conference

COLUMN width and color came in for the lion's share of consideration at one of the most successful Western Division Southern Newspaper Mechanical Conferences at Hotel Texas in Fort Worth, March 9 and 10.

Some 500 representatives of newspapers in Texas, Oklahoma, Arkansas, and Louisiana and sales representatives of manufacturers and suppliers were on hand for the annual session. The mechanical and production executives present stressed column width and mat shrink problems and the subject of color in general.

Exhibitors included Vandercook and Sons, Inc.; E. C. Palmer and Co., Ltd.; Linotype Parts Co., Inc.; Imperial Type Metal Co.; Fairchild Camera & Instrument Corp., and Hammond Machinery Builders.

The machinists' group meeting was held at 2 p. m. Sunday March 8 and an executive committee meeting was held at 2:30 p. m. Panel discussion chairmen also met Sunday afternoon.

The first general session was called to order at 9 a. m. Monday, March 9, in the Crystal Ballroom of the hotel by Conference Chairman F. R. Rice of the Little Rock (Ark.) *Democrat*. The invocation was given by Rev. R. W. Jablonowski, Jr., Presbyterian minister. James M. North, Editor of the Fort Worth *Star-Telegram*, welcomed the delegates to the city.

First panel discussion was concerned with composing room problems and it was headed by Roscoe Amonette of the Marshall (Tex.) *News-Messenger*. Panel members were George Avery of the Denton (Tex.) *Record-Chronicle* and Carl Williamson of the Baton Rouge (La.) *State-Times & Advocate*. Page costs and deadlines were the principal problems discussed.

Initial speaker of the conference was Harold B. Plaut, Sales Promotion Mgr. of Intertype Corporation, who reported that the trend over the country is toward narrower news columns. Mr. Plaut declared that a great deal of the waste in consumption of newsprint can be eliminated through the reduction of the overall width of the printed page.

Plaut's talk was followed by a pressroom panel discussion headed by Raymond Sanders of the Amarillo (Tex.) *Globe-Times*, with Curtis Richards of the Duncan (Okla.) *Banner* and Martin Josch of the Dallas (Tex.) *News* as panel members. Controlling ink mist and color problems dominated the discussion.

Proper Training is Answer

Harry L. Gage, consultant to the Graphic Arts and a former vice president in charge of sales for the Mergenthaler Linotype Co., spoke on *Cures for Headaches in Production of Retail Advertising*. His principal point was that proper training of the newspaper's personnel is essential to doing a good job for both the newspaper and the advertiser.

Gage urged that newspapers help organize and operate a continuing program of education for the retailers' people as well, stressing that ignorance of newspaper mechanical procedures and problems often cause the advertisers to compound the snafus that arise from time to time in the printing and ads.

Monday afternoon panel discussions were held on Stereotyping, headed by Charles T. Smith of the Tulsa (Okla.) *World-Tribune*; Machinists, headed by Louis A. Sengele of the San Antonio (Tex.) *Express & News*; Maintenance, headed by Robert E. Harrison of the *Dallas News*; Photoengraving, headed by L. W. Culver of the Fort Worth *Star-Telegram* and the Mailroom, headed by Guy Lindsey of the Fort Worth *Star-Telegram*.

Speaker at a special night session Monday was Homer Green, Vice President and General Mgr. of the Wilson Engraving Co., Dallas, whose subject was *Simplification of Color Printing in Newspapers*.

Green showed slides of run-of-paper color. He stressed that if plates are bad they will be printed badly. And he added that it was up to the engravers to find out how to make these plates exactly as they should be made in order to get a high quality color printing job.

Green also predicted that newspapers will be turning to color more and more to meet the competition of television, particularly when color television comes into general use.

Asserts Excessive Shrinkage Causes Distortion

Tuesday's program consisted of another session of panel discussions and a talk by George B. Dearnley, Vice President in Charge of Production for McCann-Erickson, Inc., New York, who discussed *Mat Shrinkage Distortion*.

Dearnley, in his address, asked for standardization of the column width in order to give advertising agencies something concrete on which to operate in making up mats and plates for use in newspaper advertising.

Dearnley pointed out that many newspapers are doing too much excessive shrinkage. He said it is to the interest of the newspapers and the advertisers, as well as the advertising agencies, to reduce this excessive shrinkage since it distorts advertising copy. Dearnley reported he had evidence to back up his charges that excessive shrinkage does cause mat distortion.

Conference Officials

Palmer Black, Mechanical Supt., Amarillo (Tex.) *Globe-Times*, was elected chairman for the 1954 conference. C. P. Lawrence, Composing Room Foreman, Tulsa (Okla.) *World-Tribune*, was elected Vice Chairman.

New Executive Committee members elected for three-year term to expire in 1956 were: Roscoe Amonette, Marshall (Tex.) *News-Messenger*; Ernest B. Narey, Little Rock (Ark.) *Democrat*; Bert Nettles, Shreveport (La.) *Times*; and James M. Smith, Victoria (Tex.) *Advocate*. John W. Gray of the Santa Fe (N.Mex.) *New Mexican*, was appointed to fill the unexpired term (1954) of Arch Dixon who has moved out of the territory.

Hold-over members on the Executive Committee are: (*Term expires 1954*) Palmer Black, Amarillo (Tex.) *Globe-Times*; Paul Tanner, Houston (Tex.) *Post*; and P. E. Miley, Sherman (Tex.) *Democrat*; (*Term expires 1955*) Lewis Boardman, Fort Worth (Tex.) *Star-Telegram*; Leven T. Deputy, Dallas (Tex.) *News*; Carl P. Lawrence, Tulsa (Okla.) *World-Tribune*; and R. L. Cooper, Norman (Okla.) *Transcript*.

Karl E. Ponath, manager Dallas Agency, Mergenthaler Linotype Co., was elected by the manufacturers' and suppliers' representatives as Chairman of the 1954 Supply Men's Committee. Eddie P. Gaughan of the New England Fibre Blanket Co., is co-chairman.

George Woodman of the Fort Worth (Tex.) *Star-Telegram* was General Chairman of arrangements for the convention.

Paper Mill Installs Seybold Trimmer—Latest addition to several finishing room trimmers at Mohawk Paper Mills, Inc., Cohoes, N. Y., is this Seybold 94 in. Trimmer. The trimmer is equipped with 12 auxiliary side tables. Both cutting and side tables are equipped with 12 auxiliary side tables. Both cutting and side tables are equipped with Seybold air-film jets to facilitate handling of large sheets.

Timken Expansion Program

A multi-million dollar expansion program for Timken Roller Bearing Co.'s Bucyrus, O., plant, has been announced by A. L. Bergstrom, Vice Pres. in Charge of Engineering. The program will include construction of a new toolroom, office building, locker room and cafeteria building, and boiler plant.

Thinking about 11½ pica columns?

Linotype now offers 7 faces for composition on 11½-pica measure—

For publishers who are contemplating change-over to 11½-pica columns, LINOTYPE has cut two agate and five text faces for classified ad and news composition in the narrow measure.

Here are these new Teletypesetter faces, each available with Bold Face No. 2:

Agate: **5½ pt. Teletypesetter Ionic No. 5 (5½△88)**
5½ pt. Teletypesetter Corona (5½△90)

Text: **7½ pt. Teletypesetter Corona (7½△52)**
7½ pt. Teletypesetter Paragon (7½△54)
7½ pt. Teletypesetter Excelsior (7½△58)
7½ pt. Teletypesetter Ionic (7½△60)
8 pt. Teletypesetter Corona (8△900)

These faces have been thoroughly revised to conform to the new measure. Yet their basic design is the same as the comparable standard TTS cutting.

With them you can set from regular wire-service tape to the narrow line without sacrificing legibility. If you are not yet on a TTS circuit, you can go down to 11½ picas by using these new faces manually and still retain editorial content. For full information, call your Linotype Production Engineer.

MERGENTHALER LINOTYPE COMPANY
29 Ryerson Street, Brooklyn 5, New York

• LINOTYPE •

Agencies: New York, Boston, Chicago, Dallas, Atlanta, Cleveland, San Francisco, Los Angeles

In Canada: Canadian Linotype, Limited, Toronto, Ontario

Set in Spartan Medium and Heavy series with Stellar Bold display

Patents

For The GRAPHIC ARTS

Covering patents issued Feb. 3, Feb. 10, Feb. 17, Feb. 24.

Binding, Cutting, Perforating:

2,627,966. FEED MECHANISM FOR BOOK TRIMMING MACHINES includes an endless conveyor and an endless transfer belt having its upper flight disposed to support a book and convey it downwardly directly onto the feed conveyor. Drive means include a drive shaft for the belt. A stop member is movable into and out of the line of travel of a book supported on the upper flight of the belt and is formed to coact with the belt to arrange the leading edge of a book in a plane normal to its line of travel. Means are provided to maintain the books in aligned position upon the belt after they have been aligned and released by the stop member for delivery onto the feed conveyor. Invented by Charles L. Moyer, deceased, late of Chicago, by Clifford S. Bassett, executor, Chicago. Assigned to C. L. Moyer Co., Chicago. Application Dec. 22, 1947. 9 Claims.

2,629,590. COLLATING MACHINE comprises a series of inclined collecting tables, the end of each table overlapping and spaced from the end of the adjacent table. A series of paper feeding means are at right angles to the inclined collecting tables. Each of the means includes a platform, a portion of which is inclined corresponding to the inclination of the adjacent collecting table, a belt and cooperating rollers, and means for collecting the sheets over each other and ejecting the collated sheets. Machine is provided with a transparent cover forming the top portion of a passageway so the operator may see the condition of the sheets and detect any trouble. Invented by Walter H. Smith, Toronto, (Ont.) Can. Assigned to Commercial Lithograph Co., Ltd., Toronto. Application Feb. 2, 1949. 14 Claims.

Composing Room:

2,627,794. BODY TYPE ASSEMBLY DEVICE is used in producing high grade proofs for display headings, layouts, offset printing, zincs, etc. Device comprises a frame having a guideway shouldered to receive rectangular type blocks having transparent characters therein. Oppositely disposed slides clamp the type blocks in the guideway and transversely locate the type blocks in the frame. A transparent slide is wider than the guideway and movably mounted at a different level. The slide is supplied with a pattern of opaque dots which may be registered with the transparent characters of the type blocks for giving a benday effect to the proof. Invented by Joseph F. Murphy, West Roxbury, Mass. Assigned, by direct and mesne assignments, to Lumitype Corporation, Roxbury, Mass. Application Apr. 14, 1948. 1 Claim.

2,627,795. BODY TYPE ASSEMBLY OUTFIT is for assembling photographic type blocks for contact printing, particularly for producing display headings, layouts, offset printing, etc. Device consists of a rectangular base having a spring mounted holder movably mounted therein and presenting a series of longitudinal slots uniformly arranged in the body of the holder in multiples of type point spacing. Guide rails are inserted in selected slots and rest upon the surface of the base and project above the surface of the holder. A row of transparent type blocks have characters defined by opaque areas retained between the guide rails upon the holder and movable therewith while the guide rails remain at rest. Invented by Joseph F. Murphy, West Roxbury, Mass. Assigned to Lumitype Corporation, Roxbury, Mass. Application Nov. 17, 1949. 3 Claims.

Feeding, Folding, Delivery:

2,629,300. SHEET COUNTING AND TAB INSERTING DEVICE is used with a printing press having a continuously rotatable impression cylinder and a blanket cylinder which moves sideways when sheets are rejected at the guide for registration. Electrical impulses are responsive to rotation of the impression cylinder. An electrical accumulator accumulates the impulses and the tab inserting means is operated in response to the accumulation of a predetermined number of electrical impulses by the accumulator. Accumulator comprises means for delaying the accumulation of impulses for a predetermined number of impulses at the beginning of the printing operation so as to allow the first sheet to be printed to pass through the press before the accumulation of impulses begins. Invented by Robert B. Smith, Dayton, O. Assigned to Reynolds & Reynolds Co., Dayton, O. Application Feb. 16, 1949. 6 Claims.

2,629,323. SHEET HANDLING MECHANISM FOR ROTARY PRINTING PRESSES comprises cooperating rotatable blanket and impression cylinders and a table from which the sheet is fed to the cylinders. Two endless movable transfer chains carry a gripper bar and the chain movement moves from a sheet receiving position relative to the table. The direction of movement of the chains and hence the gripper bar may be reversed. The sheet releasing position to which the gripper bar is moved upon reversing the direction of movement of the chains is a different position than that which the gripper bar is otherwise moved. Invented by Harold K. Baumgardner, Shaker Heights, and Joseph D. Kreis, Cleveland Heights, O. Kreis assignor to Baumgardner. Application Aug. 20, 1947. 45 Claims.

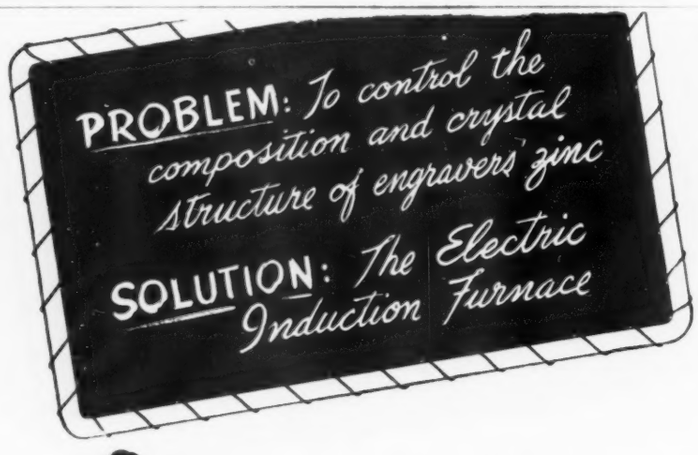
2,629,562. REPLACEMENT ROLL ACCELERATING MECHANISM FOR WEB SPLICING DEVICE in which is incorporated a surface driving wheel which effectively accelerates the web roll without bouncing the web and without ironing back the slack in the surface layer of the web. Wheel has a web roll surface engaging tread formed of partially compressible resilient material corrugated transversely of the tread. There is a movable support for totatably supporting the web roll and an arm pivotally supported above the path of movement of the roll support. A guide roller is at the depending end of the arm for engagement with the surface of the web roll on the support to guide the wheel into overlying engagement with a roll moved beneath the arm on the support. Invented by Paul L. Tollison, North Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Application June 13, 1953. 12 Claims.

Miscellaneous:

2,629,592. JOGGER comprises a base member, a V-shaped trough having its apex directed downwardly or edgewisely supporting a stack of paper sheets, and springs for supporting trough in a vertical position on the base member for vibratory movement in all directions. Springs are the sole means of support for the trough on the base. Vertical flanges are on one side of trough. An electric motor is attached to and supported by the trough. Motor has a powered shaft parallel to the flanges and an eccentric weight is secured to the shaft for rotation therewith whereby there will be imparted to sheets supported in the trough a horizontal fluffing motion perpendicular to the surface of the sheets as well as a jobbing motion in the plane of the sheets. Invented by Robert C. Line, jr., Missoula, Mont. Unassigned. Application Apr. 2, 1951. 4 Claims.

2,627,667. PRINTED WEBS ARE DRIED by apparatus which includes supports and translating apparatus for the web, a chamber for superheated steam, one wall of which has a plurality of nozzle passages terminating close to the web and a series of baffles in the chamber to provide zig-zag

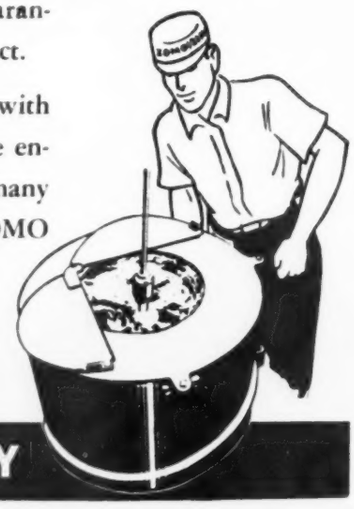
All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.



Variation in the quality of engravers' zinc was a serious problem for many years, until the makers of ZOMO ZINC decided to do something about it. After thorough research, the melting of zinc in crucibles was replaced by the Electric Induction Process.

This electrically controlled method of melting and casting, produces engravers' zinc of absolutely uniform crystal structure, and a composition guaranteed within 5/100ths of 1% exact.

The Electric Induction Process, with its outstanding advantages to the engraving industry, is one of the many reasons for you to specify ZOMO ELECTRIC ZINC & A-Z ALLOY thru your supplier.



ZOMO ZINC • A-Z ALLOY

connected nozzle headers for the nozzle passages. Heating elements are associated with the nozzle headers to maintain the steam in superheated condition. An exhaust header is disposed to the rear of the nozzles and on the same side of the web as the nozzles. Invented by Joseph R. Gillis, Kalamazoo, Mich. Unassigned. Application Oct. 7, 1946. 18 Claims.

2,629,671. PHOTOTHERMOGRAPHY, PRINTING SHEET AND PRINTING INK THEREFOR is used for both monochrome and multicolor printing of a half-tone or a line image. As distinguished from the line scanning and expansion photothermography methods, this invention is described as fusion photothermography. The method consists in printing onto a paper support a uniform layer of ink which absorbs heat producing radiation and converts it to heat and which contains a coloring material and a vehicle which is an organic compound selected from the group consisting of benzophenone and methyl o-benzoylbenzoate. The ink contains no material other than the vehicle melting within 20 deg. C. of the melting point of the vehicle. After bringing the support and ink layer to a uniform temperature below and within 20 deg. C. of the melting point of the vehicle, the area of the layer is illuminated with heat producing radiation through a negative sheet which has radiation transparent and radiation opaque areas. This melts the ink at the radiation areas so that ink fuses at that area only and unmelted areas of ink at the non-radiated sections can be removed. Invented by Alexander Murray, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application Aug. 16, 1947. 7 Claims.

Platemaking:

2,629,813. ADJUSTABLE LAMP CARRIER is for use with cameras employed in the photoengraving and photolithographic industries for illuminating the copy to be reproduced. The carrier has a copyboard and a pair of lamps positioned so as to direct light at the same angle from each lamp onto the copyboard. The support makes it possible to simultaneously adjust the positions of both lamps. Invented by David M. Murphy, Mason City, Ia. Unassigned. Application Feb. 4, 1948. 10 Claims.

2,628,903. PREPARATION OF PRINTING PLATES AND CYLINDERS WITH CHLORO-BROMIDE RESIST-FORMING FILM is effected by exposing an orthochromatic stripping film having a base supporting a strippable, high contrast, silver chlorobromide, resist-forming emulsion to light rays from a predominately yellow light source through a half-tone screen having relatively opaque and transparent portions and a continuous tone black and white transparency of a subject. After removing screen, it is exposed to light rays predominately blue and the film is developed with a hardening developer, film is fixed, emulsion is stripped from base and applied to the surface of a printing plate. The plate is etched through the emulsion using the hardened areas as a resist. Invented by Hermann Kott, Verona, N. J. Assigned to Publication Corporation, New York, N. Y. Application June 10, 1950. 3 Claims.

Printing Presses and Equipment:

2,627,226. PROOF PRESS PAPER GRIPPER is used with a printing cylinder or platen. Edge of a sheet is brought to and located at a preselected position on the cylinder and the sheet gripped at such edge. Grippers are made inoperative when the bed reaches its innermost position. They are automatically rendered operable to grip the paper as soon as the succeeding printing operation starts. By reversing the turning movement of the cylinder, the bed is moved outwardly for a succeeding operation and the grippers are released for the insertion of the edge of a sheet and are again made operative to grip the paper edge. The proof print is then ready to follow the printing cylinder upon reversing its movement for the succeeding printing operation. Invented by Freeman Barney, Spring Lake, Mich. Assigned to The Challenge Machinery Co., Grand Haven, Mich. Application Dec. 13, 1948. 4 Claims.

2,627,229. PLATE CYLINDER FOR ROTARY PRINTING MACHINES. A printing plate is held on the type cylinder by a clamping strip, which may be the stop strip and is provided with retaining strips for the straight edge of the plate. The clamping strip has inclined surfaces at its ends which lie against complementary bevelled lips, and is forced toward the cylinder by movement of the clamping jaws for the curved lateral edges of the plate. The strip is depressed onto the cylinder against spring action so that it will automatically be lifted away from the cylinder as the jaws are opened. Invented by Paul Dietrich, Augsburg, Germany. Assigned to Maschinenfabrik Augsburg-Nurnberg A.G., Augsburg, Germany. Application Sept. 19, 1949; in Germany Oct. 1, 1948. 9 Claims.

2,627,230. BLANKET TENSIONING MEANS. The invention relates to a printing machine cylinder having a mechanism for securing blankets on the cylinder. The mechanism includes a means for attaching one end of the blanket to the cylinder and a reel rod rotatably mounted in the cylinder and to which the other end of the blanket may be attached. Bearings rotatably support a worm for rotating a worm wheel. The latter in turn rotates the reel rod. The worm is movable axially in the bearings and is biased in one direction by a spring. Invented by William F. Huck, Forest Hills; Franz Heller, Mount Vernon, N. Y., and Alexander J. Albrecht, West New York, N. J. Assigned to R. Hoe & Co., Inc., New York, N. Y. Original application May 26, 1945; divided and this application Jan. 6, 1951. 1 Claim.

2,627,354. AUXILIARY TRAY SUPPORTING DEVICE, for association with a printing press capable of printing paper sheets of considerable weight and surface area, operates to temporarily support a tray in position to receive printed sheets from the press during the interval that the tray loaded platform of the stacking apparatus is removed and replaced. A pair of tray supporting bars are positioned between frames spaced to permit movement of platform therebetween. A bar is supported for horizontal movement by slidable means fixed to the frame which comprise spaced stud pins having one end secured to bar and horizontal support collars for the pins. An air piston is operatively connected to each bar for horizontally manipulating the bars in unison. A three-way control valve simultaneously controls operation of pistons. Invented by John J. Isella, North Haven, and Philip F. Pabst, New Haven, Conn. Unassigned. Application Apr. 28, 1950. 7 Claims.

2,628,558. REGISTERING DEVICE FOR PRINTING PRESSES employs two steel straps carrying movable quad guides and hoppers. The straps are secured together at right angles to each other and held in place by steel pins or the like set in metal adjustment blocks at each side of the printing platen. These blocks are screwed into metal plates which are secured to the press. They are held outside the width of the press bed beyond the possibility of contact therewith. Register guides are capable of making a hair line register and one that can be adjusted to any position, angle or any size and weight of stock and can be set instantly for the closest work. Invented by Israel Levin, Chicago. Unassigned. Application Oct. 10, 1949. 1 Claim.

DEFERRED PATENT SUMMARIES

from the April issue of *Printing Equipment Engineer* covering patents issued January 6, 13, 20 and 27, 1953.

Platemaking:

2,624,700. **PREPARATION OF PRINTING SURFACES FOR PHOTOGRAPHING.** Method of preparing for photographing a printing form containing printing surfaces of type metal and printing surfaces of at least one metal other than type metal comprises electroplating onto the printing surfaces, which are of a metal other than type metal, a very thin coating of a metal which, when clean and polished, has light reflecting properties equal to polished type metal. A light-absorbing coating is applied to the entire surface

Modern Plant Uses miller Presses

Sayers Printing Co. Pressroom

View shows brand new 27" x 41" Miller Letterpress units. As a team, the pair of two colors produce the finest four color process results, while the third matching single color unit provides flexibility in the production of single, three, or five color work, and for varnishing. Write for literature describing these presses.

MILLER PRINTING MACHINERY CO.

1103 Reedsdale Street • Pittsburgh 33, Pa.

Copy and Layout by
Mr. Henry Schmidt, Superintendent
Sayers Printing Co.
St. Louis, Mo.

of the form and then removed from the relief surfaces. The relief printing surfaces are abraded to produce a diffusively reflecting finish of sufficient fineness that the individual lines in the surfaces are not visible to the naked eye. Invented by George L. Morrison, Evanston, Ill. Unassigned. Application April 10, 1948. 4 Claims.

2,625,851. CAMERA LENS BOARD is adapted for use with large, stationary suspended cameras of the type used for photoengraving color work, one type of which is covered by patent No. 2,585,927. The board is centrally provided with a circular aperture. The usual structure mounting the lens, diaphragm, and shutter is rigidly mounted on the front of the lens board in registration with the aperture. A flashlight is mounted on front of board and may be swung into coaxiality with lens. A filter has five openings covered by differently colored plastics and is pivoted on back of board to selectively register each color with lens. A compensating glass is also pivoted on rear side of board and is swingable into coaxiality with lens when a half tone screen is not used. Each part is remotely operable by motors. Invented by Herbert Gelb, New York, N. Y. Assigned to Joseph Gelb Co., New York, N. Y. Application April 29, 1949. 3 Claims.

2,626,541. STEREOTYPE PLATE FINISHING MACHINE comprises, in combination, a frame and a cylindrical saddle carried by the frame which has at least one side opening. Stereotype plate is releasably secured to the saddle in a position to extend over the opening. A milling cutter is within the saddle. Cutter is movable through the opening and into engagement with a plate on the saddle. Saddle is adjustable relative to the cutter. A transparent guard plate extends over the saddle opening. A plurality of projector units are secured to the frame each including means for projecting an image through the guard plate onto a stereotype plate on the saddle. Invented by Charles L. Richards, South Plainfield; Isidor Tornberg, Plainfield and Paul L. Tollison, North Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Application October 1, 1948. 14 Claims.

2,626,866. PROCESS OF FIXING LITHOGRAPHIC DIAZOTYPE PRINTING FOILS WHICH HAVE BEEN EXPOSED TO LIGHT. A lithographic printing material is made from photosensitive material sensitized with a light sensitive diazo compound which upon exposure to light decomposes into a fatty ink receptive substance by exposing the photosensitive surface to light through an original. The exposed sur-

Strawberry Hill Press, Long Island City, N. Y., recently installed its sixth Seybold 64 in. Automatic Spacer Cutter in the finishing department. The cutter was installed at the company's new and larger quarters at 23-02 49th Ave. The company, of which John McQueeney is President, specializes in labels, packages and advertising material for national accounts. Above (left to right) are Vince Stafford, Harris-Seybold New York representative; Leo Bettone Bindery Foreman and George Horbert, Asst. Foreman.

Model "E" Semi Cylindrical Form O Scorch

A. P. S. Exclusives!

STEREOTYPER'S SEMI-CYLINDRICAL DRY MAT SCORCHER MODEL "E"

FEATURES:

- Adjustable thermostatic control
- Uniform heat
- Heat range 200° F to 550° F
- Self conforming cover
- Pre-Drying or final scorch
- Wire Woven Asbestos Cloth
- Standard voltage, 220 volts, 1 or 3 phases
- Price $260.00 f. o. b. Lynnfield, Mass.
  With timer $300.00
- Floor space 31" x 28"
- Shipping weight 180 lbs.

AMERICAN PUBLISHERS SUPPLY, INC. P. O. BOX 421 LYNNFIELD, MASS.

face is treated with an aqueous solution containing a water soluble organic colloid substance to form a coating. The coated material is subjected to light without use of an original whereby material will no longer be affected by light, but, upon removal of colloid substance, will function as a lithographic printing plate. Invented by Wilhelm Neugebauer, Wiesbaden-Bierich, Germany and Jakob Barthenheier, Eddersheim-on-the-Main, Germany. Assigned to Kalle & Co. Aktiengesellschaft, Wiesbaden-Biebrich, Germany. Application January 13, 1949. In Germany October 1, 1948. 8 Claims.

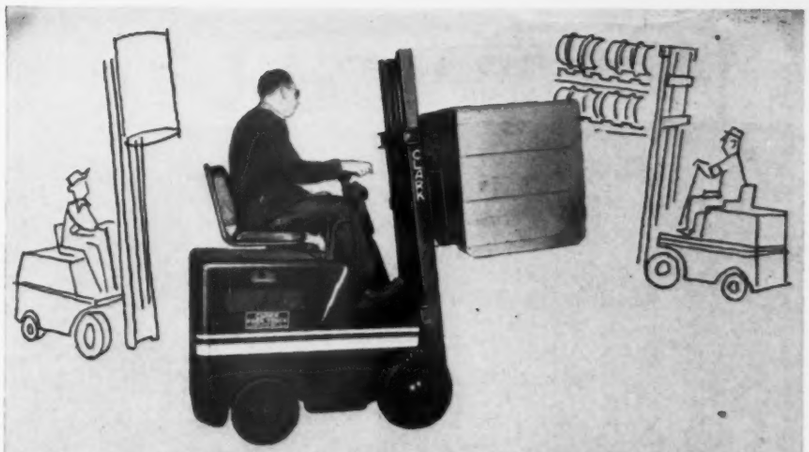
Printing Presses and Equipment:

2,624,204. MECHANICAL MOVEMENT or pivot gearing for printing and manifolding machines aims to eliminate self-oscillation and comprises a driving crank, a drive-forming rocking lever, a three-pivot coupling and associated pivoted controls for the rocking lever and a stationary pivot on the frame of the gearing. The coupling is formed of two plates spaced apart by pins of the pivots of the coupling and pivoted members and rocking lever are coupled with the pins. The coupling is coupled directly with the rocking lever on the driven side, and through one of the pivoted members, with the driving crank. The third pivot is connected, through the second pivot, with the stationary pivot. Invented by Otto Babst, Berlin-Haselhorst, Germany. Assigned to Rotaprint Akt. Ges., Berlin, Germany. Application June 22, 1950; in Germany, December 31, 1948. 8 Claims.

2,624,276. SCREEN PRINTING MACHINE, in which the squeegee mechanism can be stopped for adjustment without stopping the entire machine, uses a common shaft for driving the moving parts such as a reciprocating squeegee mechanism, a movable printing bed, a rocker cradle and a squeegee elevating mechanism. A novel clutch is interposed in the driving connections between the source of power and the shaft, the clutch providing the means by which the squeegee and other moving parts may be stopped. Invented by Jess D. Klopfenstein, Oak Park, Ill. Assigned to the Meyercord Company, Chicago, Ill. Application December 16, 1947. 14 Claims.

2,624,389. MAKEREADY PREPARING PRESS comprises a pair of flat platens, substantially coextensive, at least one of which is heated and one of which has a soft resilient surface. The platens are resiliently hinged to one another along one edge and urged toward each other along their opposite edges by means of a releasable latch handle which is connected to a manually controlled, cam-actuated lever which is resiliently fulcrumed. Platens are mounted so as to maintain uniform pressure when various thicknesses of material are positioned between them. Press is for uniformly pressing and thermally consolidating the several laminae of a multiple make-ready, such as used in high class letter-press color printing. Invented by George W. Bungay, New York, N. Y. Assigned to Oxy-Dry Sprayer Corp., New York, N. Y. Application June 19, 1950. 6 Claims.

2,625,735. END SEAL FOR PRINTING



WHICH POWER TYPE IS BEST FOR YOU?

...electric, gas, diesel or L.P. gas?

No two jobs are exactly alike, so there's no such thing as one "best" power type. Which type is best *for you*?—that's the important question. The only person who can give a really *unbiased* answer is one who knows them all, and knows where they fit.

That's your local CLARK Dealer. He carries electric, gas, diesel and L. P. gas units—and he's got no ax to grind for any one. His object is to provide the one that's best for you. For example, careful application analysis often proves that *electric* trucks are best for certain jobs because of these advantages:

WHEN THE ANSWER IS *Electric* CLARK ELECTRICS ARE THE ANSWER ...*Here's why:*

1 Better battery efficiency—users report *more work* per amp-hour with CLARK.

2 Greater stability—safer for load, safer for operator.

3 Faster acceleration, greater speed—gets more work done, covers more ground.

4 Safer, smoother stops—with CLARK's positive-controlled, reverse torque braking.

5 "Application-engineered"—for special requirements, CLARK provides custom engineering.

★ Economical operation on low-cost electric power

★ Long life, less maintenance—electrics have fewer, simpler moving parts

★ Smooth, vibration-free handling of fragile loads, less wear on truck

★ Quiet, clean operation

Which power type is right for you? No matter what it is, you'll find it in the CLARK line of quality handling equipment. You'll always be right when you buy from CLARK.

1903 1953 CLARK EQUIPMENT

CLARK ELECTRIC, GAS, DIESEL, L.P. GAS FORK TRUCKS AND POWERED HAND TRUCKS • INDUSTRIAL TOWING TRACTORS

INDUSTRIAL TRUCK DIVISION • CLARK EQUIPMENT COMPANY • BATTLE CREEK 15, MICHIGAN

Please send: ☐ Condensed Catalog ☐ Driver Training Movie ☐ Have Representative Call

Name_____

Firm Name_____

Street_____

City_____ Zone_____ State_____

AUTHORIZED CLARK INDUSTRIAL TRUCK PARTS AND SERVICE STATIONS IN STRATEGIC LOCATIONS

NEW...

a "custom made" ad assembly cabinet to meet today's production needs!

Hamilton Ad Assembly Cabinet
No. 4102C01

Hamilton presents a new and greatly improved line of ad-assembly cabinets, with storage units especially designed to meet today's production needs. These cabinets will accommodate full length strip and base material and have ample space for cut-to-measure material and galleys of ad composition. Interchangeable storage units permit you to tailor cabinets precisely to fit your own requirements. Find out now how these new cabinets can increase your compositor efficiency by 10% to 15% and save up to 30% in floor space.

Hamilton has a handy folder which completely describes this new line and the possibilities it offers you. For your free copy see your Hamilton Dealer or send the convenient coupon provided below.

Hamilton PEAK PRODUCTION **equipment**

PRINTING EQUIPMENT DIVISION
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Hamilton Manufacturing Company, Two Rivers, Wisconsin

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For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D.C.

ROLLERS is of the type used for the distribution of inks containing hydrocarbon, ketone and ester solvents. It is in the form of a sealing ring which surrounds a part of the end of the metal roller so as to engage it tightly, such ring having a face abutting a face of the covering of the roller. The covering and sealing ring are bonded or fused together at their adjoining faces so as to seal completely the adhesive layer alone or the fibrous layer and its adhesive layer against access by ink solvents and thus prevents loosening of the covering from the metal roller during use. The part of the roller engaged by the ring is radially displaced inwardly from the surface to which bonding layer is applied. Invented by Joseph J. Hitov, Belleville, N. J. Assigned to Resistoflex Corporation, Belleville, N. J. Application December 7, 1948. 4 Claims.

2,625,878. ROLLER ADJUSTING MECHANISM FOR ROTARY PRINTING PRESSES in which a plate cylinder is journalled in the frame and a roll cooperates with the plate cylinder provides bearing blocks for the ends of the roll slidably mounted relative to the plate cylinder. The mechanism for adjusting the shaft ends of the roll either individually or together comprises a feed screw operatively connected to each bearing block, a manually adjustable shaft having a geared connection with one of the feed screws, and a similar shaft connected to the other feed screws. The shafts are concentrically disposed with one shaft extending through a bore of the other shaft, such shafts having adjacently disposed hand wheel extensions at the same side of the frame for individually turning each shaft. The hand wheels may be locked together for simultaneously turning the shafts by either hand wheel or both. Invented by John R. Baumgartner, Milwaukee, Wis., Unassigned. Application December 26, 1950. 3 Claims.

2,625,879. INKING MECHANISM FOR PRINTING MACHINES, in combination with a form-carrying bed, form-inking rollers to which bed is reciprocated and an ink fountain roller, has a drum which continuously rotates in one direction from which ink from fountain roller is transferred to the form-inking rollers. A ductor roller is mounted for movement alternately into direct contact with the ink fountain roller and into direct contact with the inking drum for transferring ink from fountain roller to the inking drum. A driven starter roller, arranged for direct contact with the ductor roller during its passage from the ink fountain roller to the inking drum, is adapted by such contact to effect preliminary distribution of ink on the ductor roller during its passage from the fountain roller to the inking drum and to drive the ductor roller at the same surface speed as the inking drum at the time of contact therewith. Invented by Fred Spence, Sale, Eng. Assigned to Linotype and

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EASTERN NEWSPAPER SUPPLY, INC.

9603 Northern Boulevard • Corona, L. I., N. Y.

Machinery, Ltd., London, Eng. Application March 21, 1947; in Great Britain March 26, 1946. 8 Claims.

2,626,563. AUTOMATIC SHUTOFF FOR PRINTING PRESSES provides a means for stopping a press having a delivery mechanism for delivering sheets or the like from a stack to an impression cylinder. Delivery mechanism includes vacuum suckers. Shut-off stops the press on the opening of the vacuum system to atmospheric pressure. Press will be stopped should even one of the vacuum suckers be left exposed as, for example, if a piece of paper to be printed upon is not being held by all of the vacuum suckers because one has released or one has not gripped the paper, thus holding the paper in an improper manner. Invented by J. F. Banthin, Bridgeport, Conn. Unassigned. Application May 25, 1948. 13 Claims.

2,626,564. SAFETY STOP FOR BED AND CYLINDER PRINTING PRESSES is operated by an electromagnetic means which stops the printing press on failure of gripper fingers to receive a sheet from the cylinder. A trigger tripping mechanism comprises a lever pivotally mounted on the press frame. A vacuum operated plunger in communication with a suction system is connected to the lever. A spring actuates the lever to stop the machine on failure of the vacuum system to operate. A dog is mounted on the other arm of the lever and is spring-actuated to start the press. A pawl is movably mounted on the reciprocating bed of the press and dog and the pawl engages part of the dog when the vacuum system ceases, thus giving a dual stopping mechanism for the press. Invented by J. F. Banthin, Bridgeport, Conn. Unassigned. Application November 16, 1949. 5 Claims.

2,626,566. DUCTOR ROLLER CONTROL includes in combination an ink ductor roller and clutch means mounted at one end of the roller. The clutch permits independent rotation of the roller in one direction and rotates with the roller when its direction is reversed. A bearing cap with side walls embraces the periphery of the clutch to maintain the roller in its operative position. A brake is pivotally mounted between the side walls of the bearing cap to engage the roller journal. Brakes have independently adjustable means for selectively varying the pressure on the roller journal. Invented by Bruno B. Pasquinelli, Chicago, Ill. Application July 11, 1950. 4 Claims.

2,626,801. AIR FLOAT JOGGER DEVICE is for printing presses having means for preventing offsetting on the overlying sheets, and comprises a box having opposing side and end walls. A plurality of air jet nozzles are mounted vertically in the walls and have vertically spaced orifices in their inner faces communicating with interior of the box. Orifices are upwardly inclined to direct such a blast into the box. Successively lower orifices are inclined at a lesser angle than the preceding

Herbick & Held 50th Year — Albert C. Held, President of Herbick & Held Printing Co., Pittsburgh, Pa., stands beside a replica of the pushcart in which he made deliveries when he joined the firm as a boy of sixteen. The cart was one of many features of a golden anniversary party sponsored recently by the printing company. Herbick & Held claims the largest letterpress and offset pressrooms in western Pennsylvania. Among the plant's equipment is a 40 in. ATF color precision camera and a Sheridan inserter-stitcher-trimmer.

orifice. Means connect the nozzles to a source of air under pressure. Valves slidably disposed on the inner faces of the nozzles control flow of air in a vertical plane. Means are provided for adjusting horizontal directional flow of air from nozzles into box. Invented by Cecil W. Uriell, San Jose, Calif. Unassigned. Application July 1, 1949. 2 Claims.

Moves Boston Branch

The New England branch of Chemco Photoproducts Co., Inc., has moved to new quarters at 255-A Huntington Ave., Boston 15, Mass. Ken McNeil is Branch Mgr.

Monotype School Reopens

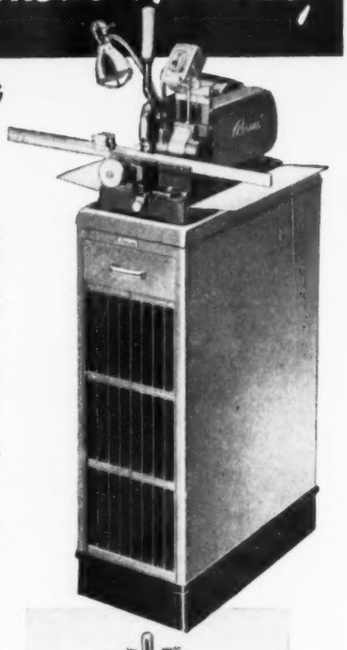
The Lanston Monotype Machine Co. has reopened its greatly expanded and completely reequipped school in the Company's head office at 24th St. at Locust, Philadelphia. The school offers free courses in the operation of the Keyboard the Combination Keyboard and Caster, Type and Rule Caster, Composition Caster, Monotype-Thompson Type Caster, Material Making Machine, Giant Caster, and the newly developed Monophoto Composing Machine, when it is available, and also a course in elementary hand composition for non-printers. Refresher courses in latest machine improvements are available.

DO THE WORK OF HOURS *in Minutes!*

SLASH YOUR PRINTING COSTS WITH THE

Rouse

POWER MITERER



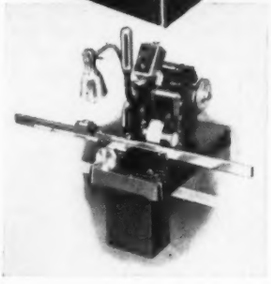
If you need miters in either small or large quantities, no other machine nor method can turn out anywhere near as many perfect joining miters so quickly from strip material. That's how the Rouse Power Miterer can slash your printing costs by doing work in minutes that now takes you hours.

A Rouse Power Miterer won't cost you one cent! Printers the world over say that money paid for a Rouse Power Miterer quickly comes back through tremendous savings in expensive time. After getting your money back, you'll start collecting daily dividends from permanently lower operating costs.

FROM THE SMALLEST JOB SHOP UP TO THE LARGEST PLANT, ONLY ROUSE MAKES A POWER MITERER FOR EVERY TYPE OF USE.

You may buy any Rouse Power Miterer as a bench model or with any other equipment you wish.

Virtually every printing plant in the world uses one or more Rouse products.



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MITERING MACHINES
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TYPE GAUGES
SLUG CLIPPERS
BAND SAWS

EXECUTIVE Cs

H. Guy Bradley, Production Mgr. of the Eli Lilly Co. printing plant, Indianapolis, Ind., retired from active duty with that company on March 31. He entered the printing business in 1908. He became head of the Eli Lilly & Co. plant

H. G. BRADLEY

in Dec. 1916. Aside from the general run of work executed in that plant, Bradley specialized in labels and four color process work. He is a past President of the Intl. Assoc. of Printing House Craftsmen as well as of the local Indianapolis Club. He has been interested in Graphic Arts industry educational work from the time of the Ben Franklin Clubs. Always generous in passing along technical information as to how to do something particularly difficult, Bradley was also known for his willingness to address local Craftsmen's Clubs. After a Western trip with Mrs. Bradley, he will act in an advisory capacity to the trade. E. B. Byfield has succeeded him at the Lilly plant. Byfield has had 23½ years experience in the commercial printing field, 10½ years of which have been spent at the Lilly plant.

Carl Sorenson, previously in charge of sales engineering, has been appointed Sales Mgr. of the Lanston Monotype Machine Co., it has been announced by Robert F. Nelson, President. Sorensen has been with Lanston since 1936, except during service in World War II. A graduate of Temple University, he has also attended Spring Garden Institute and Drexel Institute of Technology.

Mr. and Mrs. J. S. Mertle have announced their removal to new home address at 7 Lake Blvd., Oskosh, Wis. The eminent Graphic Arts photomechanical expert and historian and Mrs. Mertle formerly resided in Cincinnati. The move occurred the middle part of April.

"Oh...It's Wonderful"

★ ★ ★

(wrote Parker D. Childs of Northern Printery, Cloquet, Minn. on March 25th . . . about their new BAUMFOLDER)

• Daily we get long letters from our Users . . . in great detail . . . of the terrific Velvet Profits, owing to the several-operations-in-one of their Many-Purpose, Many-Profit . . . BAUMFOLDERS . . . but the "three little words" of Mr. Childs sums it up.

• Since V-E Day . . . OVER 8500 Bookbinders . . . Printers, etc. have given additional life-blood (ADDITIONAL NET PROFIT) to their business, by adding one or more of these Modern "Gold-Mines". And . . . the UNPRECEDENTED VOLUME has enabled us to build and sell most efficiently—and economically—so that we have been able to hold the line against increasing OUR prices (as other printing machinery and most everything else has been inflated).

• We beg you—to NEVER BUY any second-hand BAUMFOLDER without first wiring us (collect) giving serial number (for its age) etc. because, all too often, 20 and 30-year old, obsolete models are being panned off as . . . "Modern" BAUMFOLDERS.

• If 8500 firms since V-E Day couldn't get along without this (Oh . . . It's Wonderful) "Gold-Mine" of maximum net profit, won't you look into it . . . NOW? Thanks a million.

Russell Ernest Baum

LOmbard 3-8164 **Call Collect**

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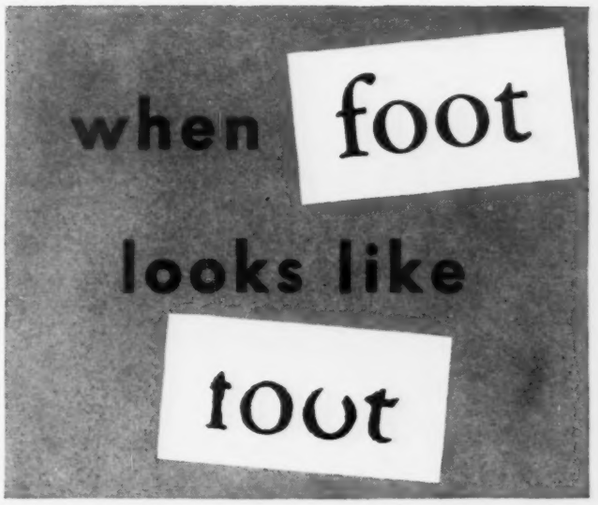


Getting too many broken characters lately due to faulty type metal? There's a permanent cure for that. Just put Imperial's "Better Metal-Better Printing" Program to work for you. It is a simple plan that will take all the headaches out of your type metal. Here's how:

1 **PERIODIC ANALYSIS SERVICE** plus detailed laboratory reports without charge to keep you informed as to the exact condition of your metal supply.

2 **PERSONAL COUNSEL** from Imperial's representative who is a type metal specialist whose only interest is your interest because he serves the graphic arts EXCLUSIVELY.

3 **PLUS METAL SERVICE** which consists of exchanging your dross for an equal weight of proper adjusting alloy to maintain your working metal supply at full casting efficiency.

Why not start now to get the full benefits of this Imperial "Better Metal-Better Printing" plan?

Imperial

TYPE METAL COMPANY

SERVING THE GRAPHIC ARTS *Exclusively*

PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

BOOTH'S ZINK CUT CEMENT

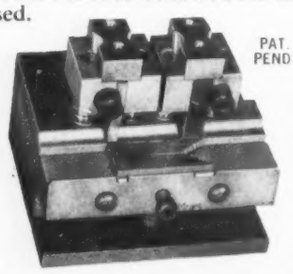
BEST for mounting cuts and solidifying type elements for standing ads. It mounts cuts quickly and holds them tighter. Used in printing plants all over the country. Get your order in now for a supply necessary for your needs.

Prices: 75c per tube, $6.00 per dozen in the United States.

E. A. BOOTH RUBBER CO.
2855 Scarboro Road
Cleveland Heights, Ohio

DISTRIBUTOR STOPS? MISALIGNMENT? HAIRLINES?

These are common and **costly** matrix troubles wherever LINOTYPES and INTERTYPES are used.



The Align-A-Mat

This precision-built tool will correct worn lugs on mats so they will distribute properly. The same operation will also restore alignment. When sorting up fonts, old mats will align with new ones.

Over 400 leading large and small newspapers, job printers, trade and ad shops are using the *Align-A-Mat* and saving **time** and **money**.

The *Clean-A-Mat* helps eliminate hairlines.

Please write for descriptive literature.

FISK INDUSTRIES, 130 W. 46th ST. NEW YORK 36, N. Y.

This is L. C. Bollinger, newly chosen Treasurer of Ideal Roller & Mfg. Co. He has been connected with the company for 30 years. Previous to being made Treasurer he was Asst. Secretary and Controller. He served in 1942-1943 as President of the National Assoc. of Cost Accountants.

Robert R. Myers, 71, President of the Capitol City Printing Plate Co., Des Moines, Ia., passed away April 15. He had been ill with cancer. He had been associated with the electrotyping business all his life, starting as an apprentice in 1899 in the Government Printing Office, Washington, D. C. He was a past president of the Intl. Assoc. of Electrotypers and Stereotypers and served continuously in various capacities in the association for a great many years. He was active in Des Moines civic affairs. He was a member of the Advertising Club, Rotary, Elks, Spectators Club and Masonic bodies including the Shrine. Surviving besides his wife are three sons, Robert R., Fred and Harry, all of Chicago. Myers was developer and inventor of the electrotype centrifugal casting process and had other improved electrotyping processes to his credit. He was an active sponsor and past officer of Printing Plates Research, Inc., a national group of electrotypers conducting research work through Battelle Institute at Columbus, O., for developing and refining the electrotyping process. His acquaintance throughout the entire Graphic Arts industry was wide. He was well liked and honored as a sincere and aggressive exponent of finer printing from electrotype plates.

S. C. Partridge, General Mgr. Industrial Div., Timken Roller Bearing Co., has announced the appointment of Robert G. Morgan to post of District Mgr. Moline, Ill., office, and Robert L. Williams to the post of District Mgr., St. Thomas, Ont., office.

Norman A. Mack has been appointed Technical Director of Printing Developments, Inc., a subsidiary of Time, Inc., it has been announced by T. A. Dadisman, Vice Pres. Mack has been president of Norman A. Mack Associates, a consulting firm he formed in 1951 and has now dissolved. Springdale Lithure offset printing process was a project which Mack worked on for the past 15 months, in collaboration with Printing Delevopments, Inc. His first responsibility, says Dadisman, will be to head up development work on the Lithure plate and another offset plate not yet announced. This involves the designing and equipping of PDI's manufacturing plant in Racine, Wis. Mack will also act as research and liaison head between the Lithographic Technical Foundation and PDI and with Time, Inc.'s Research Laboratory at Springdale, Conn., where he will make his headquarters. He was a member of LTF's Research Committee for several years.

Burton E. Lindberg (shown in this illustration), has been placed in charge of the recently opened Western office of Vandercook & Sons, Inc. at 3156 Wilshire Blvd., Los Angeles. Lindberg was formerly associated with Harry W. Brintnall Co. and Leach Printers Supply Co.

The fiftieth anniversary of his association with the company was observed in April by Grover C. Mutchler, Vice Pres. in Charge of Research and Development of Easton, Pa.'s Mack Printing Co. Ap-

preciation was extended to Mr. Mutchler by President Harvey F. Mack at the fifteenth annual banquet of the Mack Printing Co. Employees' Assoc. (both shown left to right in accompanying illustration). A resolution prepared by the Board of Directors was also presented to Mr. Mutchler. A specially made matched set of golf clubs, golf bag and supply of balls constituted part of the recognition and appreciation extended to Mutchler. Mr. Mutchler began work for Mr. Mack as a pressman April 1, 1903. From 1905 to 1921 he was foreman of the Monotype Dept. and foreman of the press department and Asst. Supt. until 1936. He functioned as General Supt. until 1948, when he was named Director of Purchases, Engineering and Research. On June 20, 1950, he became Vice Pres. in Charge of Research and Development. His long and meritorious service to the Mack Printing Co. and in a broad way to the Graphic Arts Industry in general, was acclaimed at the banquet tendered by the firm's employees' association.

Ernest Ryan, of the Newark (O.) *Advocate*, during April became Composing Room Supt. of the *Rocky Mountain News* in Denver, Colo.

Four promotions in the Printing Products Div., Minnesota Mining & Mfg. Co. have been announced. Leo L. Norwich was named Eastern Regional Sales Supervisor; Carl E. Kreutz was made Sales Supervisor for Spherekote products and offset plates in the West Coast area;

because

WETTER NUMBERING MACHINES

give you...

- **PERFECT NUMBER SEQUENCE** through jam-proof, non-skip design.
- **CLEAN SHARP IMPRESSIONS** of every number, every time—no gumming or smudging.
- **ACCURATE REGISTER**...consistently even line up of every number for neatest impressions possible.

Machine Illustrated:
RIGHT ANGLE ROTARY MODEL

The smallest stock typographic machine made (only 50 points wide), this sturdy little machine is ideal for number printing in tight places (stamps, coupons, tickets, etc.). Drop ciphers in all wheels except unit. Constructed entirely of steel, this machine prints the same legible, accurately-registered numbers as any other Wetter—with the same speed and economy. Available in either Roman or Gothic style figures.

Wetter Numbering Machines are *precision printing tools,* sturdily made for top performance even under heaviest press conditions. Action is designed to precise engineering standards; number faces are carefully ground for perfect impressions.

That's why—no matter what you try—you can always NUMBER IT BETTER WITH A WETTER.

Write for free descriptive folder today.

8784

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ATLANTIC AVENUE & LOGAN STREET · BROOKLYN 8, N. Y.
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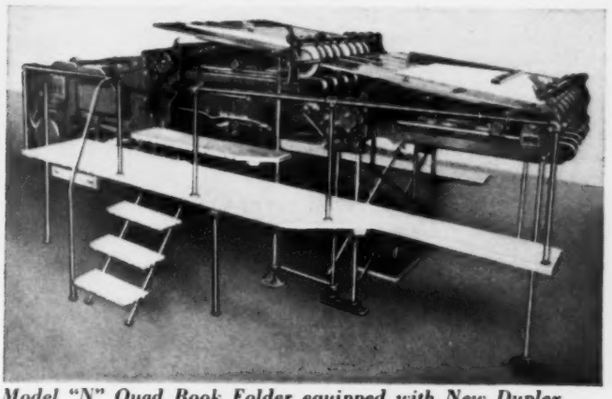
Adapting your Dexter Model "N" Quad Book Folder to run 128 pages



Model "N" Quad Book Folder equipped with New Duplex Attachment. Rear view showing two Cross Feeders.

Your Dexter Model "N" Quad, now set up to deliver four 16 page signatures, or two 32 page signatures made up of inserted 16's, at each cycle, can now be converted to practically double its present capacity.

With the New Duplex Attachment, it will deliver four *32* page closed head signatures, perforated head and foot — or, on certain lightweight stocks, two *64* page signatures (inserted *32*'s) — instead of its present two 32's.

To your present "N" Quad are added another cross continuous feeder and an extra first fold level. The *two* cross feeders in tandem arrangement feed the sheets, each to its separate conveyor, in timed relationship.

Accurate register is assured by slow-down provided at top and bottom first fold level to eliminate buckling at the front gauge. Independent register is provided for each sheet at front and sides.

From this point, the standard "N" Quad mechanism takes over and the folded 32 page product is eventually delivered, perforated head and foot, into separate packer boxes.

Your Model "N" Quad can still be operated as a standard single quad delivering the usual four 16 page signatures or two 32 page signatures (inserted 16's) at each operation.

The Duplex Attachment will not change the maximum and minimum sheet sizes now handled by your Model "N", but it *will* effect savings in folding costs and still further economies in subsequent gathering and sewing operations.

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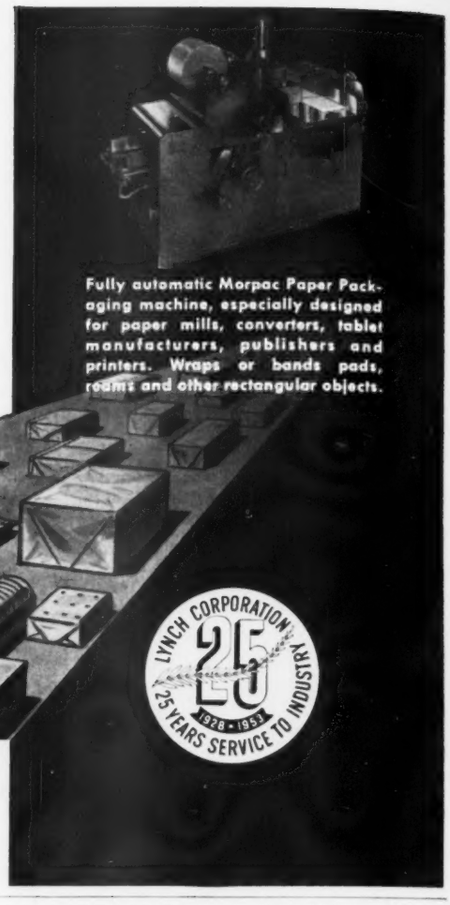
Roads to better packaging lead to LYNCH

Faster production, better package appearance, and lower costs are roads to *better* packaging that Lynch knows well. For more than twenty years, Lynch engineers have designed precision equipment to solve these package room problems and others. They have built Lynch machines to last . . . to perform efficiently for years. To solve your packaging problems and cut costs, an experienced Lynch engineer is available to help. No obligation. Just call or write.



Fully automatic Morpac Paper Packaging machine, especially designed for paper mills, converters, tablet manufacturers, publishers and printers. Wraps or bands pads, reams and other rectangular objects.

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George F. Murphy was named Sales Supervisor in the Northwestern Territory of the country; and Charles R. Bertram was named Sales Engineer for the Printing Products Div. and will work with the Division's sales supervisors throughout the country.

Appointment of John T. Roth as Works Mgr. of Intertype Corporation has been announced by H. A. Peterson, Vice Pres. Roth joined the Intertype Toolmaking Div. in 1925, advanced through the ranks to become production engineer during World War II, and served in that capacity prior to his present appointment.

Richard W. Turner has been elected Vice Pres. of Sta-Hi Corporation, it has been anounced by Craig C. Baker, President. Turner has served for a number of years as assistant to the president in charge of production and engineering. At the annual Sta-Hi board of directors meeting Baker was reelected President; Allen Royce, Treasurer; and O. T. Cochran, Secretary. Lee H. Satre was named Chief Engineer in charge of design and product development.

Conference Dates

(With Organization Names and Principal Officers)

American Photoengravers Association — 1953 Convention, Hotel Statler, Boston, October 12, 13 and 14. President, D. H. Murnik, Oakland National Engraving & Gravure Co., Oakland, Calif.; Frank J. Schreiber, Executive Secretary, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference—1953 Conference, Milwaukee, Wis., June 15, 16, 17 and 18. Conference sessions and exhibits to be held in Civic Auditorium; Conference headquarters, Hotel Schroeder. Chairman of the Committee, William E. Gibbons, Production Mgr., Chicago (Ill.) *Herald-American;* Manager ANPA Mechanical Dept., Vernon R. Spitaleri, 370 Lexington Ave., New York 17, N. Y.

Fifth District Craftmen's Conference — 1953 Conference, Olds Hotel, Lansing, Mich., June 26 and 27. Secretary-Treasurer, Robert Wolf, Richardson-Taylor-Globe Co., 4501 Mitchell Ave., Cincinnati 32, O.

Graphic Arts Trade Association Executives—President, Robert Hostetter, Printing Industry of Pittsburgh, 3124 Jenkins Arcade Bldg., Pittsburgh 22, Pa.

Gravure Technical Association—President, John E. Hazel, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.; Secretary-Treasurer, Frank Sportelli, International Color Gravure, 39 W. 60th St., New York 23, N. Y.

Great Lakes Newspaper Mechanical Conference—1954 Conference, Claypool Hotel, Indianapolis, Ind., January 10, 11 and 12. President, Horace Parker, Press and Stereotype Foreman, Richmond (Ind.) *Palladium-Item;* Secretary-Treasurer, Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press;* Chairman Mfrs. and Suppliers Committee, Joseph W. Kaercher, Linotype Representative, 5311 Broadway, Indianapolis, Ind.

Hoosier State Press Mechanical Conference — Union Bldg., Purdue University, Lafayette, Ind., September 19 and 20. Dale C. Thompson, Exec. Chairman, Indianapolis Newspapers, Inc., Indianapolis, Ind.

Illinois Newspaper Mechanical Conference — 1953 Conference, Hotel Jefferson, Peoria, Ill., September 26 and 27. President, Thomas Lowry, Peoria (Ill.) Newspapers, Inc.; Secretary-Treasurer, Wilbur L. Augspurger, Peoria (Ill.) Newspapers, Inc.; Chairman Mfrs. and Suppliers Committee, Joseph D. Goggin, Newspaper Publishers Supply Co., 1639 N. Lorel Ave., Chicago 39.

Intl. Assoc. Electrotypers & Stereotypers—1953 Convention, Statler Hotel, Detroit, Mich., September 22, 23, 24 and 25. 1953 Spring Conference, Hotel William Penn, Pittsburgh, Pa., April 13 and 14. President, Walter C. Dohm, Norman-Dohm-O'Flaherty Co., Inc., 228 E. 45ht St., New York, N. Y.; A. P. Schloegel, Executive Secretary, 701 Leader Bldg., Cleveland 14, O.

International Association of Printing House Craftsmen — 1953 Convention, Adolphus Hotel, Dallas, Tex., September 13, 14, 15 and 16. Convention in 1954 to

be held in Philadelphia, dates to be announced. President, Gordon J. Holmquist, Cole-Holmquist Press, 1228 S. Flower St., Pearl E. Oldt. Rm. 806, Transportation Bldg., 307 E. Fourth St., Cincinnati 2, O.; Convention Chairman, Homer L. Green, Wilson Engraving Co., 2117 Commerce St., Dallas 1, Tex.

International Graphic Arts Education Association — 1953 Conference, Statler Hotel, New York, N. Y., June 14, 15, 16 and 17. President, Patrick F. Boughal, New York (N. Y.) School of Printing; Acting Educational Director, Fred J. Hartman, 719 Fifteenth St., N. W., Washington 5, D. C.

International Typographic Composition Association — 1953 Convention, Mayflower Hotel, Washington, D. C., September 24, 25 and 26. President, John R. Connell, Connell Typesetting Co., 302 E. Eighth St., Kansas City 6, Mo.; Frank M. Sherman, Executive Director, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference—1953 Conference, Hotel Fort Des Moines, Des Moines, Ia., May 16, 17 and 18. President, Glen Meloy, Des Moines (Ia.) *Register-Tribune;* Secretary-Treasurer, Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conference—1953 Joint Conference, Town House, Kansas City, Kan., September 12 and 13. President, William Lawrence, Wichita (Kan.) *Eagle;* Secretary-Treasurer, Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kan.; Secretary, William Bray, Missouri Press Assoc., Walter William Hall, Columbia, Mo.

Lithographers National Association — 1953 Convention, Edgewater Beach Hotel, Chicago, June 16, 17 and 18. President, William H. Walters, United States Printing and Lithograph Co., Mineola, L. I., N. Y.; Executive Director, W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Mechanical Conference — Jointly sponsored by the New Jersey Press Assoc. and the Pennsylvaia Newspaper Publishers Assoc. Conference Director, Theodore A. Serrill, PNPA General Mgr., 209 Telegraph Bldg., Harrisburg, Pa.

Missouri Newspaper Mechanical Conference — (See Kansas-Missouri Mechanical Conference.)

National Association of Litho Clubs — 1953 Convention, Hotel Statler, Detroit, May 8 and 9. President, John F. Maquire, Offset Engravers, 42 E. 20th St., New York, N. Y.; Secretary, Angelo Pustorino, Daniel Murphy Co., 480 Canal St., New York, N. Y.

National Association of Photo-Lithographers—1953 Convention, Sheraton Hotel, Chicago, October 28, 29, 30 and 31. President, A. J. Fay, 75 Varrick St., New York, N. Y.; Executive Vice President, Walter E. Soderstrom, 317 West 45th St., New York 36, N. Y.

National Printing Equipment Association, Inc. — 1953 meeting Shoreham Hotel, Washington, D. C. directors meeting, 8 p.m., Oct. 6; members meeting, Oct. 7, 10:30 a.m. President, Fred S. Tipson, T. W. & C. B. Sheridan Co., 135 Lafayette St., New York 13, N. Y.; Secretary James E. Bennet, 140 Nassau St., New York 38, N. Y.

New England Mechanical Conference — 1953 Conference, Hotel Statler, Boston, Oct. 17 and 18. Pres., Charles W. Noonan, Pressroom Supt., Providence (R. I.) *Journal-Bulletin;* Secretary-Treasurer, Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

Northwest Mechanical Conference — 1954 Conference, Radisson Hotel, Minneapolis, Minn., February 27, 28 and March 1. President, John R. Copeland, Production Mgr., Minneapolis (Minn.) *Star* and *Tribune;* Secretary-Treasurer, Ralph Carson, Dunwoody Industrial Institute, Minneapolis, Minn.

Pacific Mechanical Conference — 1953 Conference, Statler Hotel, Los Angeles, September 25, 26 and 27. President, Al Tennyson, Composing Room Supt., Los Angeles *Times* and *Mirror;* Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles *Daily News.*

Printing Industry of America—1953 Convention, Shoreham Hotel, Washington, D. C., Oct. 5, 6, 7, 8. President, John M. Wolff, jr., Western Printing & Lithographing Co., Southwestern Div., 1310 S. Spring St., St. Louis, Mo.; James R. Brackett, General Manager, 719 Fifteenth St., N. W., Washington, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc.—1953 Membership Meeting, St. Paul Hotel, St. Paul Minn., May 14 and 15; Makeready Meeting No. 2, Hotel Sheraton-Gibson, Cincinnati, O., October 1 and 2, 1953; Second technical Conference on Color Photography and Color Separation to be held in Los Angeles during the Fall, dates and

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hotel to be announced later; 1954 meeting, May 11 and 12; 1955 meeting, May 12 and 13, city and hotel to be announced later. President, Edward J. Triebe, Kingsport Press, Kingsport, Tenn.; Managing Director, Bernard J. Taymans, 719 Fifteenth St., N. W., Washington 5, D. C.

Screen Process Printing Association—1953 Convention, Statler Hotel, New York, November 1, 2, 3 and 4. President, Joseph Grossman, Masta Displays, Inc., 230 W. 17th St., New York 11, N. Y.; Secretary, Dan Novak, 549 W. Randolph St., Chicago 6, Ill.

SNPA (Eastern Div.) Mechanical Conference — 1953 Conference, Henry Grady Hotel, Atlanta, Ga., August 24 and 25. Conference Chairman, C. Leroy Ray, Mechanical Supt., Winston-Salem (N. C.) *Journal* and *Sentinel;* Secretary, Ray B. Crow, Southern Newspaper Publishers Assoc., P. O. Box 1569, Chattanooga 1, Tenn.; Chairman of Mfrs. and Suppliers' Group, W. E. Neely, Sam'l Bingham's Son Mfg. Co., 274 Trinity Ave., S. W., Atlanta, Ga.

SNPA (Western Div.) Mechanical Conference—Chairman, Palmer Black, Mechanical Supt., Amarillo (Tex.) *Globe-Times;* Secretary, Walter Johnson, jr., P. O. Box 1569, Chattanooga 1, Tenn. Chairman of Supply Men's Committee, Karl E. Ponath, Manager, 514 Browder St., Mergenthaler Linotype Co., Dallas 1, Tex.

Technical Assoc. of the Graphic Arts — Secretary-Treasurer, Paul J. Hartsuch, Printing Ink Div., Interchemical Corp., 161 W. Harrison St., Chicago 5.

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(Continued from Page 36)

in. high, 19 1/8 in. deep and 34 5/8 in. wide.

Remington has also issued a six page, two-color illustrated folder to enable plant superintendents and other executives to determine the minimum dehumidifying equipment and capacity needed to eliminate moisture problems in their plants. The folder includes a step-by-step method to follow for arriving at the number of pints of water per hour which must be removed from the air in different applications, and the dehumidifier capacity needed to do it. When requesting this folder or more information on the Moisture Magnet, please mention PEE No. 580.

Electric Powered Punch

GENERAL Binding Corp. has introduced the Model 116-EP Electric-Powered Punch for punching of sheets to be plastic bound. Rated speed of the machine is claimed to be 20,000

sheets per hr. of ordinary weight paper or its equivalent. Multiple punching can be done up to 16 in. in one operation.

Back and side guides are set manually. The back guide controls the distance of the punched holes from the edge of the sheet, while the side guide is for centering sheets under the punching dies. Provisions are made for removal of a pin to render any of the 28 punching dies inactive.

Floor space is 48 in. by 33 in. by 18 in. deep. The GBC machine is designed for operation from either a standing or sitting position. For further information please mention PEE No. 590.

16 in. Swing, 12 Speed Lathe

FEATURES of South Bend Lathe Co.'s 16 in. swing 12 speed lathe are described in a four page, two-color bulletin recently issued. The lathe is equipped with a pushbutton control system which provides instantaneous changes between corresponding high and low speeds, multiple operations requiring frequent speed changes such as drilling and tapping, boring and reaming, or turning and facing. Several illustrations are included in the bulletin, along with

specifications. Copies may be obtained by mentioning PEE No. 551 in your request.

Ink Gauge Bulletin

THE Interchemical Wet Film Ink Thickness Gauge for measuring wet film thicknesses of ink on paper, metal and similar surfaces is the subject of a four-page bulletin released by Gardner Laboratory, Inc. Sponsor states any wet film can be measured by rolling the direct-reading, pocket size instrument over it. Two rolls, each in opposite directions, are made to obtain an average reading. The gauge is equipped with numerals which can be read in both directions. Also included in the bulletin is a table showing the seven ranges in which the Interchemical Gauge is available. Copies may be secured by mentioning PEE No. 562 in your request.

Pressroom Air-Washer

THE Paasche Pressroom Air-Washer, reported by Paasche Airbrush Co., is designed for changing air in any size pressroom from four to six times an hour. Design of the unit also permits

proper humidity to be maintained or increased if desired. Air is drawn through a wash chamber where it is washed clean of all foreign matter. Sponsor states all dirt, powders, spray dust, etc., are washed out of the air and the foreign matter deposited in a collecting tank. The clean air is exhausted back into the pressroom through a duct system and grilled outlets. The Paasche unit is available in three sizes. It is illustrated here without the ducts. More information may be obtained by mentioning PEE No. 594 in your request.

Doorless Phone Booth

AN improved doorless telephone booth, constructed with additional sound absorbing materials to increase its effectiveness in trapping noise that interferes with telephone conversations, has been announced by the Architectural Products Div., Burgess-Manning Co. To be known as the Scout model, it is designed to shield the head and shoulders of the phone user. Its uses include installation in production departments where noise from machines frequently causes difficulty in hearing during a telephone conversation. Further information may be obtained by mentioning PEE No. 554 in your request.

Materials Handling Chart

A REFERENCE chart containing 50 illustrations of materials handling equipment for all purposes is available from Kornylak Engineering Corp. The illustrations are classified by categories, such as Package Handling, Bulk Handling, Roller and Wheel Conveyor, Monorail, Power and Hand Trucks, etc. The chart is designed for either well mounting or folding to an 8½ in. by 11 in. filing size. Copies may be obtained by requesting PEE No. 571.

Bus Duct Booklet

BUS duct application to distribution systems of commercial, institutional and industrial buildings is described in a 12 page booklet issued by Westinghouse Electric Corp. Four types of bus duct are described: (1) plug-in duct which provides outlets every 12 in.; (2) low-impedance duct for long feeder runs or where minimum voltage drop is importance; (3) weatherproof feeder duct for outdoor installations; and (4) weath-

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erproof low-impedance duct. Illustrations and application data from actual installations show how bus duct solves distribution problems connected with modernization, expansion or new building programs. The use of prefabricated elbows, tees and crossovers, and sliding-type cantilever hangers to make runs of bus duct in any direction, around obstructions and corners, is also described. Please mention PEE No. 567 should you desire a copy of this booklet.

Portable Fire Extinguishers

FIVE models of a portable carbon dioxide fire extinguisher have been announced by the Fyre-Freez Div., Walter Kidde & Co., Inc. Known as Fyre-Freez, the portable extinguishers are equipped with squeeze-type valves and are available in 2½, 5, 10, 15, and 20 lb. models. The portables use Kidde lightweight cylinders and sponsor states the squeeze-type valve requires normal hand pressure to actuate the extinguisher after the safety pin has been removed.

Carbon dioxide is approved for use on Class B (flammable liquid) and Class C (electrical equipment) fires. The inert gas is a non-conductor of electricity and eventually is absorbed into the atmosphere following discharge leaving no mess to be cleaned up.

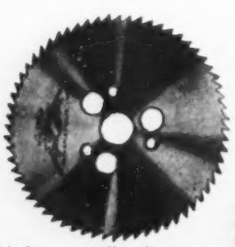
The 10 lb. model of the Fyre Freez portable carbon dioxide fire extinguisher.

Fyre-Freez extinguishers have been approved by Underwriters' Laboratories and the Factory Mutual Laboratory. More details are available by referring to PEE No. 585 in your request.

Cramer Dry Plate

THE Cramer Trichromatic plate and Trichromatic Matt plate has been developed by G. Cramer Dry Plate Co. for the production of continuous tone separation negatives from any type of original. Sponsor claims the plate possesses high speed and color sensitivity. Features include a balanced straight line curve and range of latitude in development, states the Cramer firm. It is also claimed that the gamma (contrast) can be varied by use of different developers affording control of image processing and

Graphic Arts Center Organization and Financing in Progress—Dr. Grayson Kirk (left), President of Columbia University, and Thomas Roy Jones, President of Daystrom, Inc., operate an 1830 Ramage Press which marked the announcement of Columbia's plans for a new Graphic Arts Center. Mr. Jones is General Chairman of the Campaign Committee to raise a $750 thousand endowment fund. Under operation of Columbia's Graphic Arts Center Columbia wil open her unparalleled resources to industry on a service basis for research, study and exhibition purposes, and the training of administrative and executive talent for the Graphic Arts Industry in all its phases. More than 30 thousand volumes and more than 100 thousand items now stored away in Columbia's libraries will be made available to the industries. "With the industries providing the funds, cataloging of the remaining large part of these collections will open for business these valuable source materials," stated President Kirk. In commenting upon the proposed Graphic Arts Center, Mr. Jones said: "What Columbia proposes to do may well be one of the greatest things that has happened within this vast industry in the span of our lifetime."



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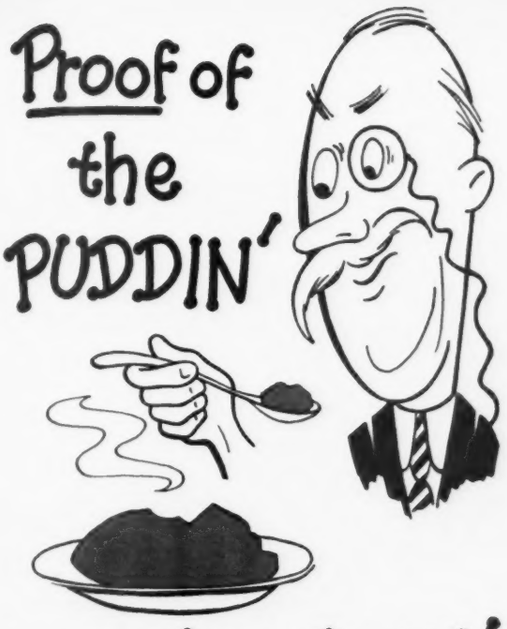

is in the EATIN'

Some forgotten business philosopher once said that to build a business a man must have more than the desire to make and sell things . . . He must have an idea . . . The "Star" idea is to go beyond the moldy blueprint —to make parts *better* wherever possible. This means not only precision of manufacture as checked by the micrometer, but also use of the best available material and improved design. This idea is responsible for the many improved parts which are aimed at better performance and greater economy.

Further, the "Star" idea is INSTANT SERVICE. Every Star Parts user will agree this is no idle boast.

This type of competition has resulted in sharp awareness, by all concerned, of the need for progress. It is the typesetting machine owner's protection from stagnation and controlled prices.

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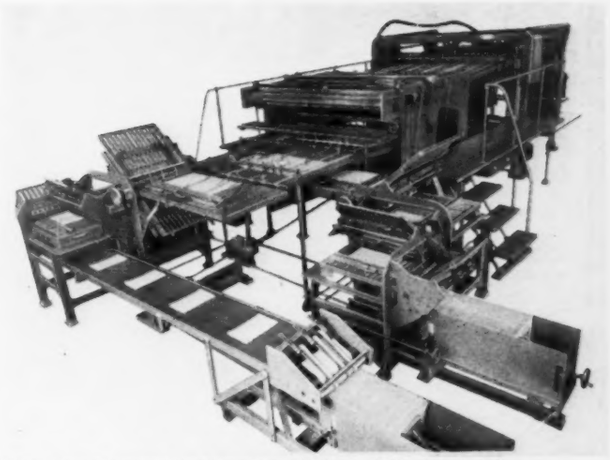
Folds sheets from 52 x 76″ offsets and rotaries without slitting on the press



The New Dexter Combination Blade and Buckle Folder

This machine is designed to take full sized sheets from 52 x 76″ offset and rotary presses. It handles sheets from 52 x 76″ maximum to 25 x 38″ minimum, and produces signatures of:

16 pages	13 x 19″ to	6¼ x 9½″
32 pages	9½ x 13″	4¾ x 6¼″
16 pages 2-up	9½ x 26″	4¾ x 12½″
32 pages 2-up	6¼ x 19″	3⅛ x 9½″

It also makes a variety of other signatures, the first fold being made with knife and subsequent folds on Cleveland folders as seen in picture above.

The combination blade and buckle folder has been designed as a high speed production machine, to handle long runs at maximum speed and minimum cost. This new Dexter folder will do a substantial job of cost-cutting in any plant that can utilize its capabilities.

The machine has a maximum speed of 4,500 cycles per hour, delivering two signatures at each cycle. The actual production will depend on kind and weight of paper and quality of work required.

This new folder is equipped with a Dexter Pile Stream Feeder to stream feed sheets to drop rollers.

The Dexter representative is ready to give you additional information about this folder, discuss its application to your production and explain the economies it may bring.

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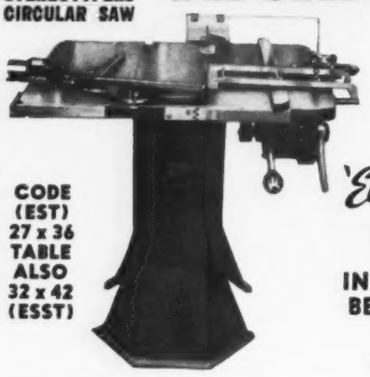

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density range. More details may be obtained by mentioning PEE No. 595 in your request.

Improved Spaceband Box Pawl—A modification in the design of the spaceband box pawl for Linotype machines (Part No. D-186) has been announced by Linotype Parts Co., Inc. The change consists of a slot at the upper portion of the pawl as shown in the accompanying illustration permitting mechanical adjustment of the pawl in compensation for the wear which may occur in both the spaceband box rails, pawls and pawl slots. The top of the pawl may be spread as desired by insertion of a screw driver, or it can be closed with a pair of pliers. The new part is known as No. D-186A. Further details may be obtained by mentioning PEE No. 630 in your request.

Gardner Catalog

GARDNER Laboratories, Inc., has issued its 1953 catalog containing illustrations and descriptions of approx. 100 testing instruments. Included in the 48 page catalog are sections on applicators for measuring film thickness, portable gloss and reflection meters, drying time instruments, reflectance devices, etc. Copies may be obtained by mentioning PEE No. 597 in your request.

Pre-sensitized Offset Plate

THE Pre-sensitized Photospeed Plastiplate Offset Printing Plate has been announced by Remington Rand, Inc. Company describes the plate as having a plastic no-grain surface bonded to a tough pulp base. After exposure of the plate on step (desensitization) is required, after which the plate is ready to run. This operation consists of wiping the plate with cotton soaked in the desensitizing solution. Company states extra information can be typed on the plate, or may be written on the plate with a ballpoint pen, after the plate is dry. An illustrated bulletin (No. DS108) is available by mentioning PEE No. 612 in your request to *Printing Equipment Engineer*.

Quillscript Type Face

AMERICAN Type Founders has introduced what it describes as a pen-flavored type face called Quillscript. According to ATF, the face is styled for use with traditional types,

Thompson Quillscript

such as Garamond, Century, Caslon, Cloister, Lydian and other sans serifs. The sponsor states that Quillscript grew out of a need felt by magazine and egency art directors for type to leaven body type areas composed of heavy, old-style faces. It was designed with a view to an easy flow of word structure and for use

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in all-cap lines. Fonts of alternate characters of the type face are available. Tommy Thompson, Norwalk, Conn., is the designer of Quillscript. It is made in the following sizes: 14, 18, 24, 30, 36 and 48 pt. Specimen sheets may be obtained by mentioning PEE No. 603 in your request.

Portable Arc Lamp

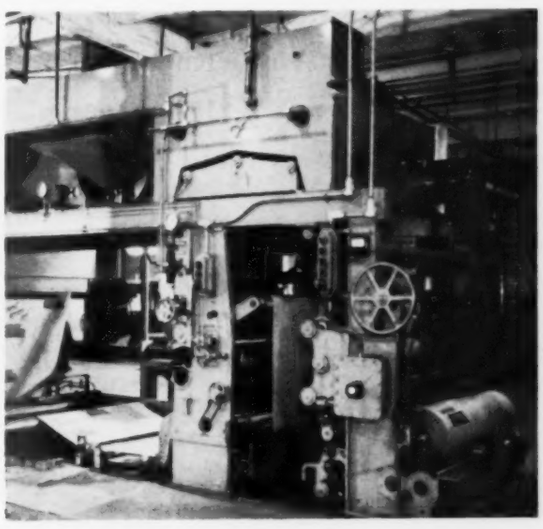
A PORTABLE arc lamp designed especially for exposing pre-sensitized offset plates up to 17 in. by 22 in. in size and photographic silk screen stencils, has been reported by nuArc Co., Inc. Designated the Model N-20, sponsor states it can be connected to any 115 v. outlet and draws 8 amps. from the line. It is further claimed that at a distance of 18 in. the lamp produces 2300 ft. candles of light. Weight of the Model N-20 is 28 lbs. Further information is available by mentioning PEE No. 628 in your request.

Portable arc lamp for exposing pre-sensitized offset plates and photographic silk screen stencils, announced by nuArc Co., Inc.

Engraver's Type Specimens

GREEN INSTRUMENT CO., INC., has recently issued a four page bulletin in which are illustrated 15 styles of letters and numerals in Master Type sets. Master Type is the copy which is traced on the Green Engraver (a pantagraph-like instrument) to produce different styles of lettering and designs for mechanical engraving. Also shown are technical symbols, Greek upper and lower case alphabets, circle templates and special brass templates. The specimens include punctuation marks and are coded as to sizes available. Copies of the bulletin may be obtained by mentioning PEE No. 629 in your request.

Rotogravure Press Installation — The ATF-Klingrose two-color rotogravure press pictured here has been installed at the Sorg Paper Co., Middletown, O., for use in its converting operations. It is described by ATF as a high-speed, two station press with unwind and rewind units, and equipped for production speeds of 1000 f.p.m., printing, drying and rewinding the stock into rolls.



Skin Protective Ointment

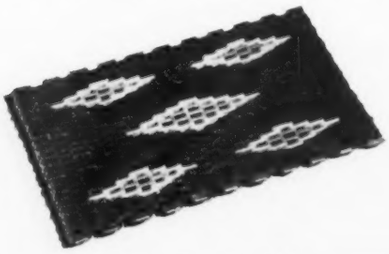
SILICOTE Skin Protective Ointment has been developed for protecting skin from chapping or irritation resulting from frequent exposure in water and other substances, states Arnar-Stone Laboratories, Inc. It may be used before exposure to prevent irritation or therapeutically to facilitate healing. Silicote ointment is available in 1 oz. tubes and 1 lb. jars. Samples and further information may be obtained by mentioning PEE No. 577 in your request.

(*Continued on Page 60*)

(*Continued from Page 59*)

Rubber Floor Mats

CORRUGATED mats made of compounded rubber links woven on 12 ga. spring steel wire are designed to prevent slipping accidents and reduce worker fatigue in the printing plant, according to General Scientific Equipment Co. Sponsor claims the mats are adapted for use where moisture, oils, animal fats, acids, chemicals, solvents and abrasives are apt to be on the floor as the rubber resists deterioration. G-S also states the mats will lay flat or roll up. Typical applications are on walking surfaces, loading platforms, washroom floors, elevators, cat walks, ramps, landings, approaches, side walks, inclines, aisles and



steps. G-S mats are available in any desired length and in widths up to 48 in. By referring to PEE No. 555, more information can be obtained upon request.

Why do I Like Imperial ?

With Imperial Register-Redibak
your etcher is assured of
fast, smooth etching and clean bottoms
on both line cuts and halftones.

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Electronic Controlled Vacuum Frame

THE Jos. Gelb Co. has designed a vacuum printing frame which features a one handle operation for locking the glass cover. Sponsor states the vacuum pressure is reached in 5 sec. by

locking the glass cover and instantly released by unlocking it. Automatic vacuum pressure for a glass is 5 in. and for film 25 in. The frame is equipped with a tankless automatic motor cut-off. It is claimed that vacuum pressure is constant at every exposure. More information may be had by mentioning PEE No. 606 in your request.

Fork-type Lift Truck

THE Hydrolift fork-type stacker, announced by Lift Trucks, Inc., can be used for lifting pallets, skids, drums, barrels and other material. Sponsor states the power hydraulic lift of the

Model HHL hand truck has a lifting capacity of up to 2000 lbs. It is also claimed that the Hydrolift can be used for stacking within the confines of a 5 ft. wide aisle. For occasional long hauls, a coupling can be provided on the Hydrolift for movement with a small powered tractor. Please request PEE No. 609 when writing for further information.

Label and Ticket Rewinder

A MACHINE for rewinding labels and tickets into tighter or smaller rolls at high speeds has been reported by Lockwood's, Incorporated. Called the Lockwood Label and Ticket Rewinder, it is designed to eliminate the need for stopping the press to take off a small roll. The machine is operated by two

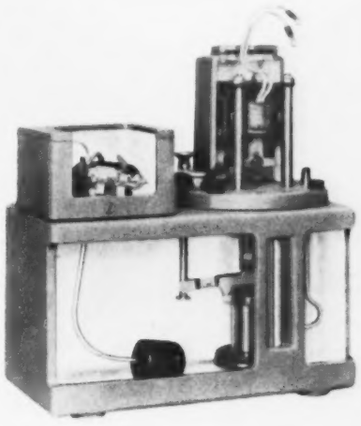
foot pedals—one for rewinding and the other for releasing the roll from the

spindle. Any width of paper from ½ in. to 8 in. can be rewound at high speeds on wooden or paper cores, or without a core. Paper can be rewound from etiher the inside or outside of the roll.

Another Lockwod's machine announced recently is the automatic Blank Shipping Tag machine. It is claimed to automatically produce finished blank shipping tags at the rate of 54,000 per hr. For additional information, please refer to PEE No. 621 in your request.

Solenoid Operated Lubricator

BIJUR Lubricating Corp. announces development of a new solenoid-operated lubricator. It has been designated Type E, can be applied to almost every tpe of machine, including printing machinery. The lubricator can be actuated by switches tripped by rotary or reciprocating motion, existing control circuits, electric timer controls, or push buttons. The Bijur Type E Lubricator (shown in cutaway view in accompanying illustration) delivers from 0.8cc (24 drops) to 0.2cc (6 drops) of oil per stroke—maximum frequency of operation is recommended at 4 strokes per min. The solenoid is rated at 4 amp., 110 v., ac.



The complete unit is available with a choice of two reservoirs, 3 pint or 6 pint capacity. Available as an extra is a unique float-switch control that can actuate a visible or audible alarm when the oil supply is low—then, if the supply is not replenished, the switch will shut off the machine, preventing serious damage to bearings. Complete information including a bulletin may be obtained by mentioning PEE No. 610 in your request.

Resumes Making No. 29

SOME time ago, Miehle Printing Press and Mfg. Co. temporarily discontinued manufacture of the Miehle No. 29 (22 in. by 28 in.) Letterpress. Now, because of the more favorable materials situation, Miehle has announced plans are being made to get back into production of the No. 29 Letterpress at the earliest possible date. Included with the announcement is the statement that the No. 29 will be a three-roller press.

Automatic Airtube Bulletin

LAMSON Corporation has published an illustrated bulletin (A-101-52) in which is described the engineering features and utility of the Lamson Airtube Automatic Switch System. Contained in the bulletin is an analysis of the system for transporting messages, copy, small articles, etc., from one point to another in a plant. In this system there are no central controls or panel boards.

In the Airtube Automatic System, metallic rings are embedded in the cylindrical carrier. Setting the adjustable rings on the carrier determines the destination. These rings act as electrical contacts for brushes in a flying selector in the tube line, and are the means for closing the electrical circuit and actuating the switch for which they are set. Thus a cylindrical carrier set for any particular station

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will switch out only at the station to which it is to be delivered.

As carriers pass through the flying selector in the tube line they cause an impulse to be sent from what is called the Elehtrigger Power Unit to the switch. As the carriers pass through the flying selector they touch a pair of contact making brushes. As the carrier closes the circuit through the adjusted ring, the flying selector triggers the switch impulse and the carrier is switched out of the tube into a terminal. Carriers may be sent from any station to any station. From 2 to 200 or more stations can be incorporated in one system. Up to 600 carriers per hour can be handled through each spacing device. Carrier speeds average up to 25 ft. to 30 ft. per sec.

The Lamson Airtube Automatic Switch System is powered by Lamson-Billmyre Centrifugal Exhausters engineered for pneumatic tube duty. A blast gate on the discharge regulates volume of air to its rated capacity. When requesting copy of Bulletin No. A-101-52, please mention PEE No. 614 in your request.

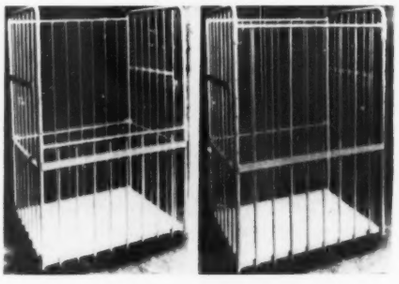
Linotype Pilgrim

PILGRIM, a type face created by Eric Gill, has been made available to British printers by the English Linotype organization, Mergenthaler Linotype Co. has announced. According to Jackson Burke, Director of Typographic Development, Pilgrim will be made available to the American trade if sufficient interest in it should develop. Sponsor states the thick and thin strokes of Pilgrim letters are not strongly contrasted and serifs are bracketed, with rounded ends to the terminals. The face is duplexed with its italic, in effect an oblique or sloping roman. Speciments of the face may be obtained by mentioning PEE No. 607 in your request.

Telescoping Side Bundle Truck

THE BND Series Bundle Truck, introduced by Leebaw Mfg. Co., is fitted with a low front wall. A telescoping door closes the wall for maximum load carrying capacity. The door is supplied with stops every 6 in. for partial closing.

The truck is available in three stand-



ard sizes and two wall types. Standard models are equipped with a 4 in. swivel caster on each end and two 5 in. rigid casters in the center, or one 4 in. swivel caster on each corner. Truck is finished in gray enamel.

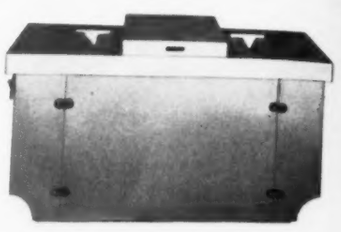
Inside dimensions range from 30 in. by 40 in. to 30 in. by 60 in. Height above casters is 55 in. Three of the six models in this series have vertical bars. Three other models are supplied with 6 in. by 6 in. mesh.

Specialized models are also designed according to individual specifications.

Further information on this truck may be had by mentioning PEE No. 618 in your request.

Hydraulic Book Compressor

HAMBRO TRADING CO. has announced the Dandu Hydraulic Book Compressor (Nipper) which can be set to handle books of the same thickness at both ends, or to run two different jobs



at the same time. Pressure is applied by a double action hydraulic ram which, it is claimed, can exert pressure up to 11 T. Pressure is regulated by a handwheel. Jaw opening is also manually controlled. Sponsor states the machine will handle up to 40 books per min. Interchangeable jaws are available. The Dandu machine can be used for book smashing by inserting a set of 4 in. jaws. Use of special recessed jaws permits handling of diaries, small Bibles and similar work. Please mention PEE No. 623 if further details are desired.

R. H. Control Device

NIAGARA Blower Co. announces new means for accurately controlling the moisture content or relative humidity in air conditioning without the need for a moisture-sensitive element to determine humidity. The new instrument is applied to the company's method of air conditioning in which air is de-humidified directly by a liquid absorbent. As the air conditioner removes moisture from the air stream passing through it, the absorbent liquid is diluted, and is continuously reconcentrated to keep it effective. The amount of moisture to be permitted in the conditioned air is governed by the concentration of the absorbent liquid. This concentration is in

(Continued on Page 64)

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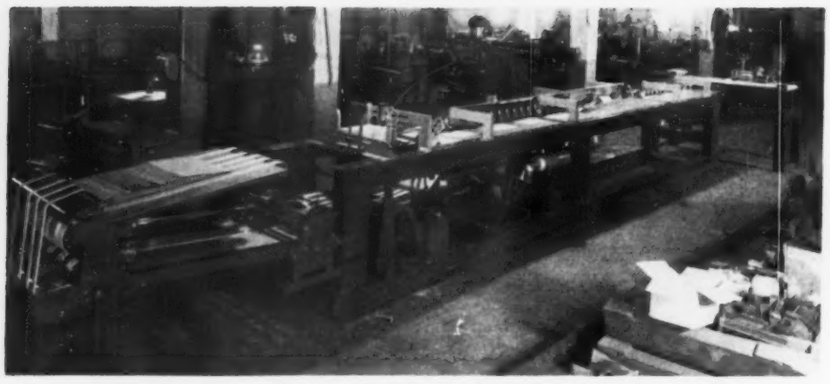


Magazine Wrapping and Addressing Machine—Magnacraft Mfg. Co. has announced a magazine wrapping and addressing machine (shown above) claimed to run at production speeds of 10,000 magazines per hr. Operations performed on the machine include flat-wrapping, fold-wrapping or band-wrapping and addressing either on strips or labels affixed to the magazine. Magazine size range is a follows: flat wrap, 5 in. by 7 in. to 11 in. by 16 in. with thickness from 3/32 in. to 1¼ in.; fold wrap, 6 in. by 9 in. to 11 in. by 16 in. with thickness from 1/16 in. to ⅜ in. More details may be obtained by addressing your request to *Printing Equipment Engineer* mentioning PEE No. 573.

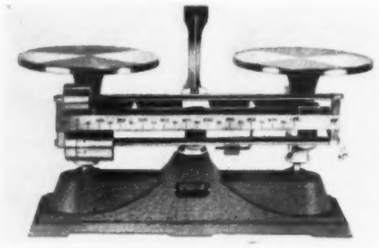
Equipment & Supplies

(Continued from Page 62)

direct relation to the boiling point of the mixture of absorbent liquid and water. Using this principle, the instrument consists essentially of a tube equipped with a heating element. A "sample" of the liquid, taken after it is reconcentrated on its return flow to the air conditioner, continuously enters this tube and is heated to the boiling point. A thermostat, with its sensing element to the tube, is set at the boiling point desired. The thermostat operates the concentrator unit to furnish a greater or less concentration of the absorbent liquid, as called for by the thermostat setting. Since a change of several degrees in the boiling point of the absorbent liquid is required to effect a change of 1% in its concentration, the control is claimed to be accurate and results in the holding of the relative humidity of the conditioned air to close tolerances with an instrument not subject to change in moisture-sensitivity. Complete information will be furnished if you will mention PEE No. 602 in your request.

Industrial Balance

THE Ohaus Scale Corp. has announced an industrial balance featuring a micrometer poise which enables the user to weigh a full range from 0 to 1000 gr. without additional weights. The poise is designed so that it may be slid



along the beam for rapid traverse and rotated for final positioning. The poise barrel is calibrated to 0.5 gr. increments which subdivide the 10 gr. beam divisions. As shown in the accompanying illustration, the balance is equipped with 7 in. diam. stainless steel plates and etched aluminum graduated beam. The capacity is 5000 gr., and sensitivity, 0.5 gr., according to sponsor. The balance also has an undivided tare beam of 1 lb. capacity. For further details, please mention PEE No. 620 in your request.

Truck Used in Bookbinding Operation — Yale & Towne has reported the use of a standard Yale Worksaver high-lift platform hand truck by Brock & Rankin, Chicago bindery, in applying pressure on books after the casing-in operation. The Worksaver is equipped with a pressure plate attached at the top of the upright and fitted with a controlled pressure hydraulic system. The truck has a clamping device which picks up the stack of books, presses them and then hauls them to storage. For more details on this operation, please mention PEE No. 619 in your request.

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May 1953

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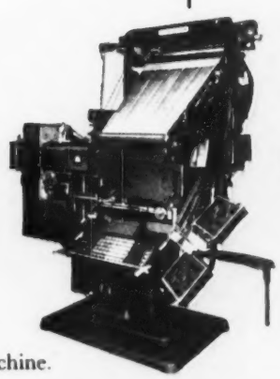

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